READ THIS BOOK
first

Power Macintosh
Setup Guide

Includes setup and troubleshooting information for Power Macintosh 7300, 8600 and 9600 series computers

Power Macintosh
Setup Guide

Includes setup and troubleshooting information for Power Macintosh 7300, 8600 and 9600 series computers

Apple Computer, Inc.

© 1997 Apple Computer, Inc. All rights reserved.

Under the copyright laws, this manual may not be copied, in whole or in part, without the written consent of Apple. Your rights to the software are governed by the accompanying software license agreement.

The Apple logo is a trademark of Apple Computer, Inc., registered in the U.S. and other countries. Use of the "keyboard" Apple logo (Option-Shift-K) for commercial purposes without the prior written consent of Apple may constitute trademark infringement and unfair competition in violation of federal and state laws.

Every effort has been made to ensure that the information in this manual is accurate. Apple is not responsible for printing or clerical errors.

Apple Computer, Inc.
1 Infinite Loop
Cupertino, CA 95014-2084
408-996-1010
http://www.apple.com

Apple, the Apple logo, AppleScript, AppleTalk, AppleVision, Chicago, ColorSync, EtherTalk, GeoPort, HyperCard, LaserWriter, LocalTalk, Mac, Macintosh, PlainTalk, PowerBook, Power Macintosh, QuickTime, and StyleWriter are trademarks of Apple Computer, Inc., registered in the U.S. and other countries.

AppleCD, At Ease, Balloon Help, Disk First Aid, Extensions Manager, Finder, Foreign File Access, and QuickDraw are trademarks of Apple Computer, Inc.

Adobe, Acrobat, and PostScript are trademarks of Adobe Systems Incorporated or its subsidiaries and may be registered in certain jurisdictions.

Claris is a registered trademark and Claris Emailer is a trademark of Claris Corporation.

Helvetica and Times are registered trademarks of Linotype-Hell AG and/or its subsidiaries.

Iomega is a registered trademark, and Zip is a trademark, of Iomega Corporation.

Netscape Navigator is a trademark of Netscape Communications Corporation.

NuBus is a trademark of Texas Instruments.

PowerPC and the PowerPC logo are trademarks of International Business Machines Corporation, used under license therefrom.

Simultaneously published in the United States and Canada.

Mention of third-party products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the performance or use of these products.

Contents

Communications regulation information vi

Preface **Where To Find Information ix**

Where to find answers x

Part I Getting Started

1 **Setting Up Your Computer 1**

Power Macintosh 7300 series computer 1

Positioning the computer 3

Plugging in the computer 4

Connecting a monitor 7

Power Macintosh 8600 series computer 11

Positioning and plugging in the computer 13

Connecting a monitor 14

Power Macintosh 9600 series computer 18

Positioning and plugging in the computer 20

Connecting a monitor 21

Connecting the mouse and keyboard 25
Turning the computer on 28
Problems turning your computer on? 31
What's next? 32

2 Learning To Use Your Computer 33

Learning the basics 34
After you take the tutorial 35
Where to find answers 36
Four simple tips for using Macintosh Guide effectively 37
Reviewing the basics 40
Turning the computer off 43

3 Working With The User's Manual CD-ROM Disc 45

Loading the User's Manual CD-ROM disc 47
Using Acrobat Reader 49
Ejecting a CD-ROM disc 54

Part II Troubleshooting

4 Start Here If Trouble Occurs 57

Step 1: Gather as much information as you can 58
Step 2: Restart your computer 59
Step 3: Check onscreen help, if you can 60
Step 4: Check the next chapter, "Solutions to Common Problems" 60
Step 5: Use Apple System Profiler 60

5 Solutions to Common Problems 63

Problems turning on or starting up your computer 64

Problems with application programs, documents, and memory 73

Problems with CD-ROM drives and discs 81

Problems with floppy disks and floppy disk drives 89

Problems with hard disks 92

Problems with your computer's speed 92

Other problems with your computer 94

Problems with your printer 99

Problems with networks and file sharing 100

6 Diagnostic Techniques 105

Checking your system extensions 105

Testing and repairing your hard disk 107

Starting up from the system software CD-ROM disc 112

Installing system software 114

Rebuilding your desktop 126

Part III Appendix

Appendix A Health, Safety, and Maintenance Tips 131

Health-related information about computer use 131

Safety instructions 136

Handling your computer equipment 137

Cleaning your equipment 142

Locking and unlocking the mouse 145

Index 147

Communications regulation information

FCC declaration of conformity

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. See instructions if interference to radio or television reception is suspected.

Radio and television interference

The equipment described in this manual generates, uses, and can radiate radio-frequency energy. If it is not installed and used properly—that is, in strict accordance with Apple's instructions—it may cause interference with radio and television reception.

This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in Part 15 of FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

You can determine whether your computer system is causing interference by turning it off. If the interference stops, it was probably caused by the computer or one of the peripheral devices.

If your computer system does cause interference to radio or television reception, try to correct the interference by using one or more of the following measures:

- Turn the television or radio antenna until the interference stops.
- Move the computer to one side or the other of the television or radio.
- Move the computer farther away from the television or radio.
- Plug the computer into an outlet that is on a different circuit from the television or radio. (That is, make certain the computer and the television or radio are on circuits controlled by different circuit breakers or fuses.)

If necessary, consult an Apple-authorized service provider or Apple. See the service and support information that came with your Apple product. Or, consult an experienced radio/television technician for additional suggestions.

IMPORTANT Changes or modifications to this product not authorized by Apple Computer, Inc., could void the FCC Certification and negate your authority to operate the product.

This product was tested for FCC compliance under conditions that included the use of Apple peripheral devices and Apple shielded cables and connectors between system components. It is important that you use Apple peripheral devices and shielded cables and connectors between system components to reduce the possibility of causing interference to radios, television sets, and other electronic devices. You can obtain Apple peripheral devices and the proper shielded cables and connectors through an Apple-authorized dealer. For non-Apple peripheral devices, contact the manufacturer or dealer for assistance.

Responsible party: Robert Steinfeld, Apple Computer, Inc., 1 Infinite Loop, Cupertino, CA 95014-2084, 408-974-2618.

Industry Canada statement

This Class B device meets all requirements of the Canadian Interference-Causing equipment regulations.

Cet appareil numérique de la Class B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

VCCI Class 2 statement

情報処理装置等電波障害自主規制について

この装置は、情報処理装置等電波障害自主規制協議会(VCCI)の基準に基づく第二種情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

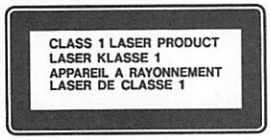
取扱説明書に従って正しい取り扱いをしてください。

CD-ROM drive

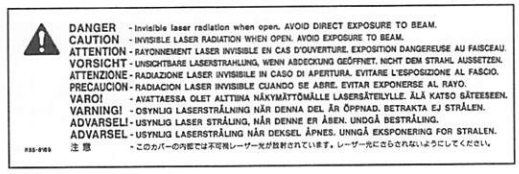
WARNING Making adjustments or performing procedures other than those specified in your equipment's manual may result in hazardous exposure.

WARNING Do not attempt to disassemble the cabinet containing the laser. The laser beam used in this product is harmful to the eyes. The use of optical instruments, such as magnifying lenses, with this product increases the potential hazard to your eyes. For your safety, have this equipment serviced only by an Apple-authorized service provider.

If you have an internal Apple CD-ROM drive in your computer, your computer is a Class 1 laser product. The Class 1 label, located in a user-accessible area, indicates that the drive meets minimum safety requirements. A service warning label is located in a service-accessible area. The labels on your product may differ slightly from the ones shown here.



Class 1 label


DANGER - Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.
CAUTION - INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ATTENTION - RAYONNEMENT LASER INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
VORSICHT - UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
ATTENZIONE - RADIAZIONE LASER INVISIBILE IN CASO DI APERTURA. EVITARE L'ESPOSIZIONE AL FASCIO.
PRECAUCIÓN - RADIACION LASER INVISIBLE CUANDO SE ABRE. EVITAR EXPONERSE AL RAYO.
VARO! - AVATTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING! - OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
ADVARSEL! - USYNLIG LASER STRÅLING, NÅR DENNE ER ÅBEN. UNDGÅ BESTRÅLING.
ADVARSEL - USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRALEN.
注 意 - このカバーの内部では不可視レーザー光が放射されています。レーザー光にさらされないようにしてください。
RSS-210

Service warning labe

Where To Find Information

You've just purchased a powerful computer with virtually limitless capabilities. So why isn't the manual the size of the London phone directory?

One reason is that the Macintosh is easier to use than other computers.

Another reason is that this book contains only the information that you need to set up your computer and start learning about it. It's important that you start with this manual. Later, you will find a great deal of additional information about your computer on the *Power Macintosh User's Manual* CD-ROM disc that came with your computer.

A third reason is that the instructions for how to use your system software are included in a comprehensive onscreen help system—Macintosh Guide. Macintosh Guide (also called Mac OS Guide on some systems) helps you in ways that a manual can't. It gives you more ways to search for information. It's "smart" enough to give you instructions catered to your situation. It can even circle things on the screen for you.

Once you've set up your computer be sure to try Macintosh Guide. You'll find it under the little yellow question mark at the upper-right of your screen.

Where to find answers

When you have questions about using your Macintosh, there are several places you can look for answers.

Power Macintosh Setup Guide

Use this book to help you set up your computer and begin using it, or to find solutions to problems.

Apple Guide

If you need help. or you experience a problem while using the computer, open the Guide (?) menu and choose Macintosh Guide (or Mac OS Guide). The Guide menu is the main source for information while you are using the computer.

Power Macintosh User's Manual

For information on installing and using software applications, communicating with other computers, or expanding your computer's capabilities, see the "User's Manual" file on the *Power Macintosh User's Manual* CD-ROM disc that came with your Macintosh.

Other manuals

For answers to questions about other equipment or about application programs you have purchased, see the manuals that came with the equipment or programs.

Apple's customer support hotline

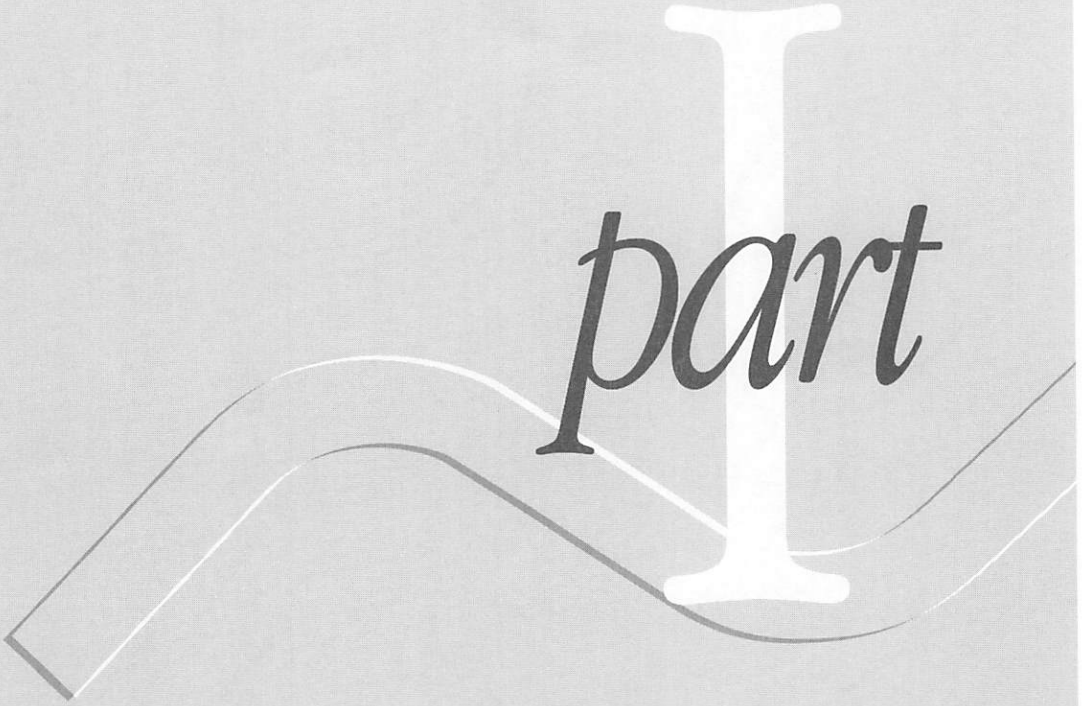
If you can't find an answer in any of the materials provided, call the customer support hotline. (The phone number for the hotline is in the service and support information that came with your computer.)

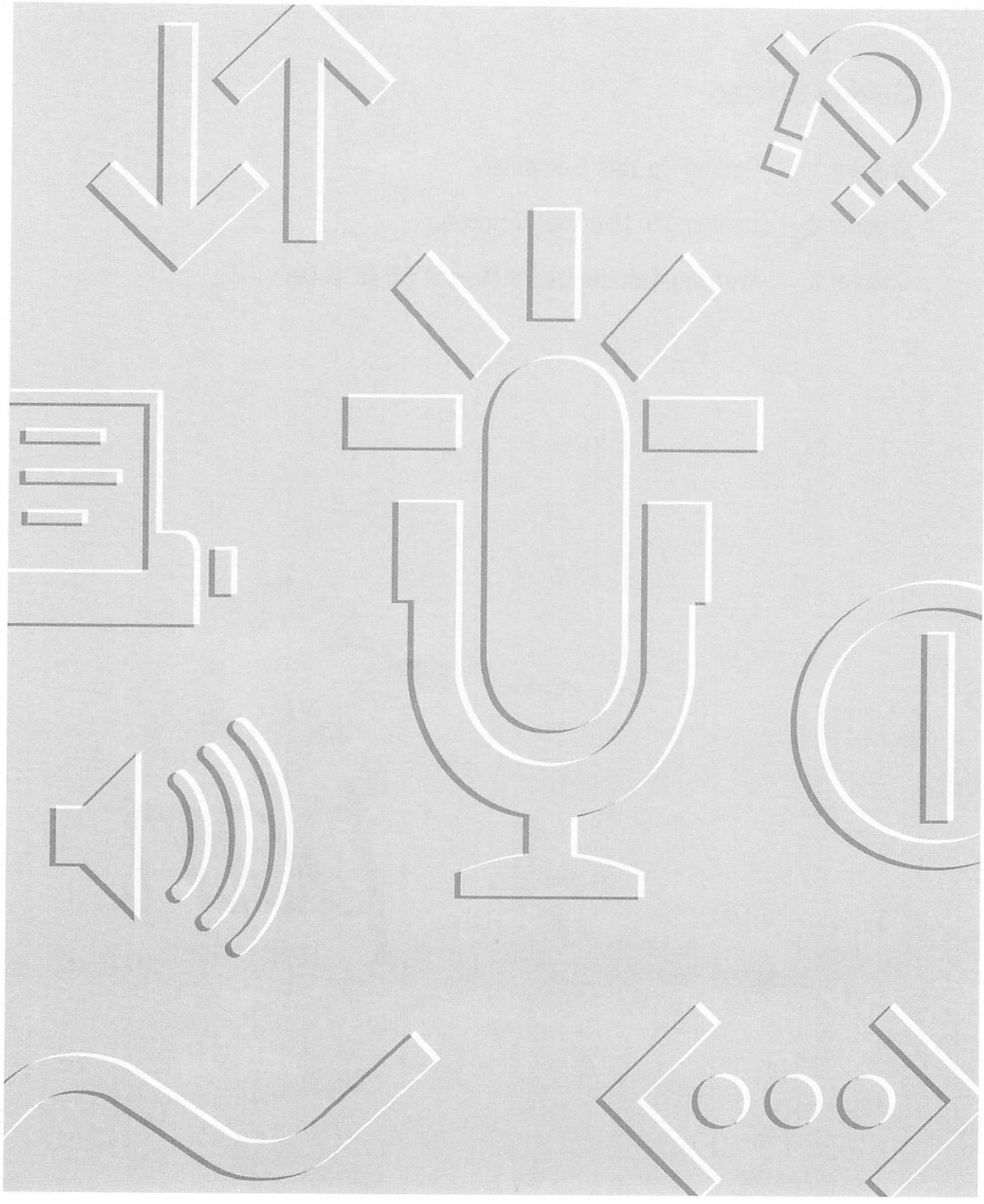
Getting Started

Chapter 1 Setting Up Your Computer

Chapter 2 Learning to Use Your Computer

Chapter 3 Working with the User's Manual CD-ROM Disc





Follow the instructions in this chapter to set up your computer.

1 Setting Up Your Computer

This chapter describes the basics of setting up your computer.

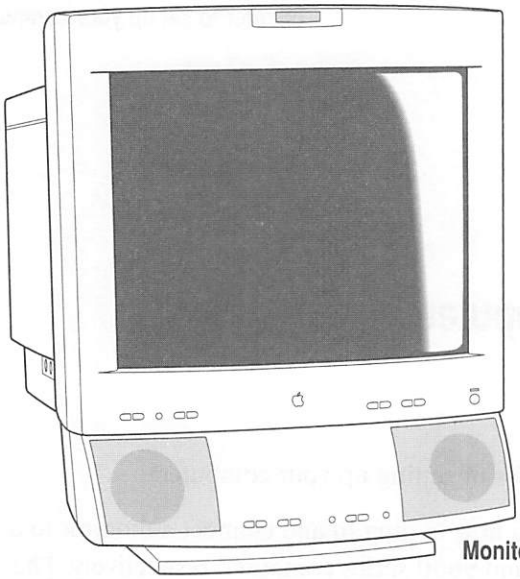
The first main sections tell you how to plug in and connect a monitor to a Power Macintosh 7300, 8600 and 9600 series computer, respectively. The later sections tells you how to connect a keyboard and mouse, and how to turn on your computer for the first time.

When you have finished setting up your computer, you can find information on connecting and installing other equipment (such as external hard disks, printers, audio equipment, memory, and expansion cards) in Chapters 7 and 8 of the "User's Manual" file on the *Power Macintosh User's Manual* CD-ROM disc that came with your computer.

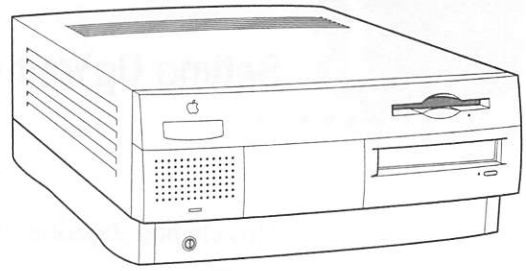
Power Macintosh 7300 series computer

The illustration on the next page shows all the equipment you will need to set up a Power Macintosh 7300 series computer and begin using it. (Note that your monitor and keyboard may look slightly different depending on what you purchased.)

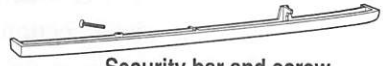
If you have a Power Macintosh 8600 or 9600 series computer, see later in this chapter.



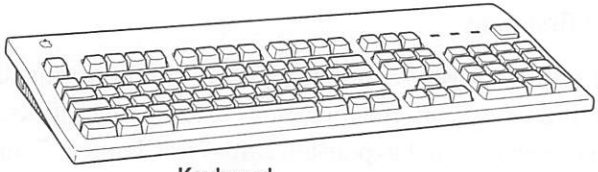
Monitor



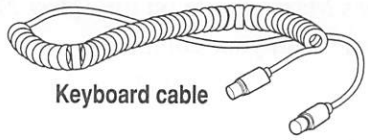
Macintosh computer



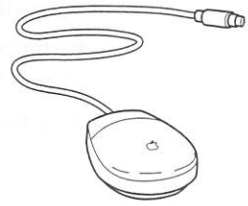
Security bar and screw



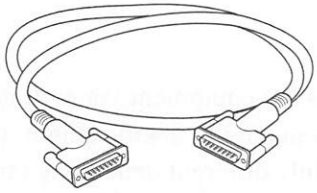
Keyboard



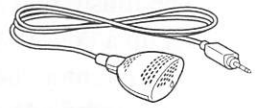
Keyboard cable



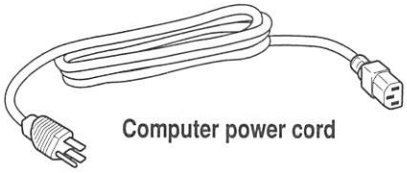
Mouse



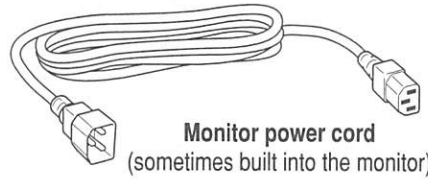
Monitor cable
(sometimes built into the monitor)



Apple PlainTalk Microphone (optional)



Computer power cord



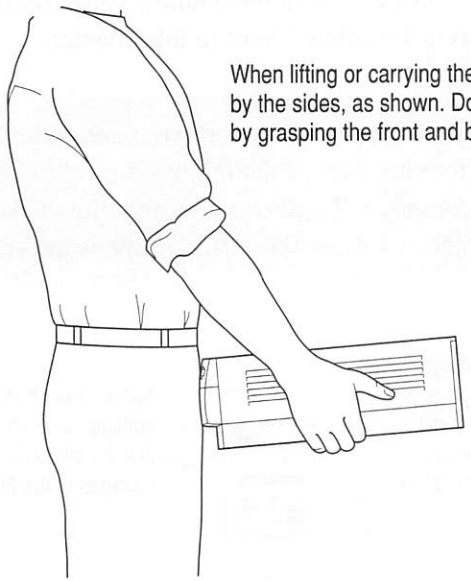
Monitor power cord
(sometimes built into the monitor)

Positioning the computer

Place your computer on a sturdy, flat surface near a grounded wall outlet.

Your Power Macintosh 7300 series computer was designed to be used and carried in the horizontal position, as shown below—it should not be used tipped on its side. You may place monitors weighing up to 70 pounds (31.75 kilograms) on top of the computer.

IMPORTANT When picking up your computer, be sure to grasp it by the sides. Grasping it by the front or back can cause the computer's cover to lift off.



When lifting or carrying the computer, always grasp it by the sides, as shown. Do not lift or carry the computer by grasping the front and back.

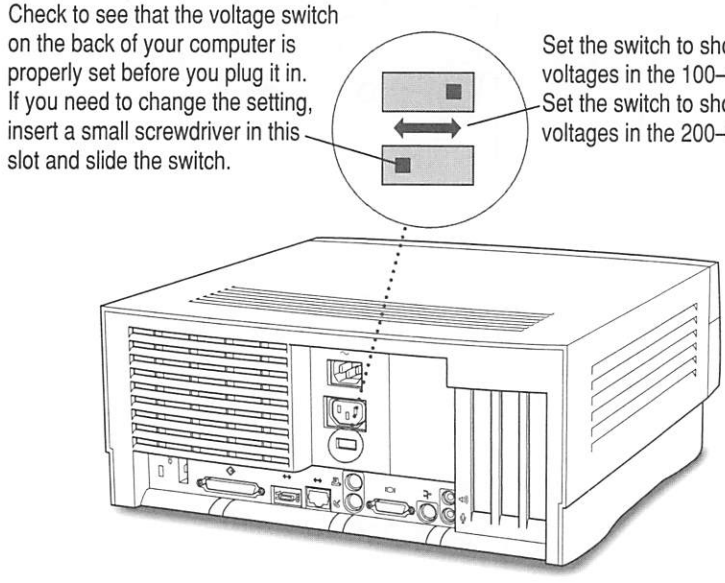
Plugging in the computer

Before you plug your Macintosh into a wall socket, carefully read all the setup instructions in this chapter. Then, before you connect any other equipment to your Macintosh, follow the instructions in this section to plug it in. The plug grounds the computer and protects it from electrical damage while you set up. When you are ready to begin, follow these steps:

1 **Make sure the voltage switch on the back of the computer is set for the kind of voltage system to which you will be connecting.**

The voltage switch must be set correctly to avoid damaging your computer. If you don't know the voltage used in the country you're in, refer to the table "Voltages for Different Locations" later in this chapter.

WARNING Setting the correct voltage for your computer does not set the voltage for your monitor even if the monitor's power cord is connected directly to your computer. To protect your monitor, be sure to use the appropriate adapter or voltage converter, if one is necessary.


Check to see that the voltage switch on the back of your computer is properly set before you plug it in. If you need to change the setting, insert a small screwdriver in this slot and slide the switch.
Set the switch to show "115" for voltages in the 100–130 V range.
Set the switch to show "230" for voltages in the 200–270 V range.

Voltages for different locations

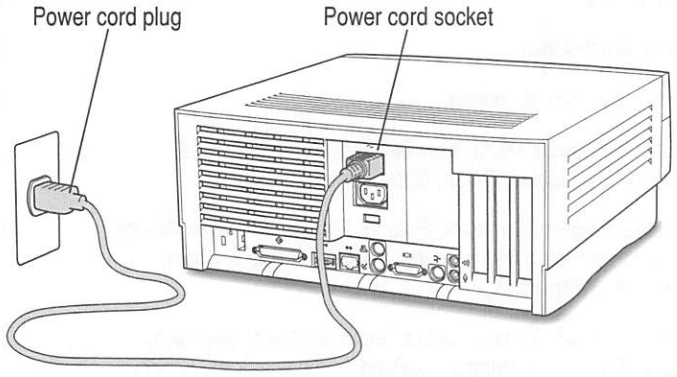
Country	Single voltage
Japan	100
South Korea	100/220
Jamaica, Taiwan	110
Peru	110/220
Brazil, Lebanon	110–220
Philippines	115
Bermuda, Canada, Puerto Rico, United States, Venezuela	120
Mexico	127
Saudi Arabia	127/220
Hong Kong	200
India, South Africa	220–250
Israel, Pakistan, Singapore	230
Australia, Kuwait, Malta, New Zealand, Northern Ireland, Papua New Guinea, Oman, Qatar, United Kingdom	240
Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland	220–230
Bahrain, Chile, China (People's Republic), Czechoslovakia, Egypt, Greenland, Hungary, Iceland, Indonesia, Iran, Jordan, Liechtenstein, Nepal, Paraguay, Poland, Romania, United Arab Emirates, Russia and the Commonwealth of Independent States (CIS), Yemen, Yugoslavia	220

2 **Plug the socket end of the computer's power cord into the recessed power socket (marked with the symbol ~) on the back of the computer.**

3 **Plug the other end of the power cord into a three-hole grounded outlet or power strip.**

WARNING Be sure to set the voltage switch on the back of your computer for the voltage system to which you're connecting.

This equipment is intended to be electrically grounded. Your Macintosh is equipped with a three-wire grounding plug—a plug that has a third (grounding) pin. This plug will fit only a grounded AC outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact a licensed electrician to replace the outlet with a properly grounded outlet. Do not defeat the purpose of the grounding plug!



IMPORTANT The only way to disconnect power completely is to unplug the power cord. Make sure that at least one end of the power cord is within easy reach so that you can unplug the computer when you need to.

Connecting a monitor

You can connect many types of monitors to your Macintosh computer, including most standard monitors. See the *Technical Information* booklet that came with your computer for a complete list.

This section contains instructions for connecting most types of monitors. You should also refer to the instructions that came with the monitor for any special instructions.

IMPORTANT If you are connecting an Apple monitor that has built-in speakers or a microphone, you may need to install monitor software after you have set up and turned on your computer. Otherwise, you may not be able to use all the monitor's features. See the instructions that came with the monitor for more information.

Connecting the monitor power cord

At minimum, monitors have two cords to connect: a power cord and a monitor cable. To connect the monitor power cord, follow these steps:

1 **Place the monitor near the computer.**

Keep these considerations in mind:

- You can place monitors weighing up to 70 lbs. (31.75 kg) on top of the computer.
- Allow at least three inches for air circulation around the computer and monitor.
- Make sure that the top of the screen is slightly below eye level when you're sitting at the keyboard.
- Position the monitor to minimize glare and reflections on the screen from overhead lights and windows.

2 **Connect the monitor power cord to the monitor.**

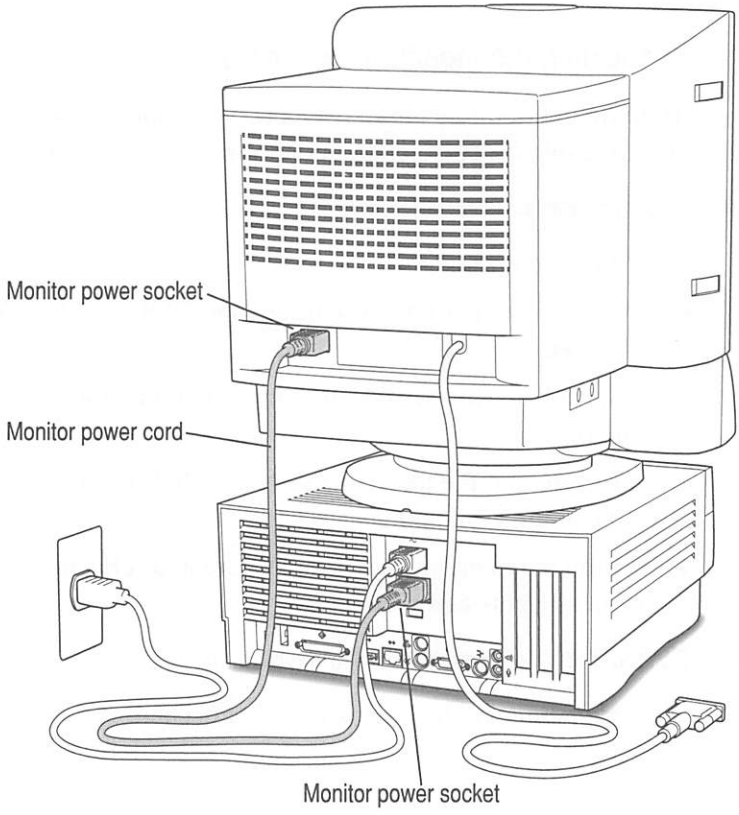
On some monitors, the cord is already attached.

3 Plug in the monitor power cord.

Some monitor power cords are designed to plug into the back of your computer.

Some monitor power cords must be connected to a grounded electrical outlet, not to the computer. Check the information that came with the monitor.

WARNING Setting the correct voltage for your computer does not set the voltage for your monitor even if the monitor's power cord is connected directly to your computer. To protect your monitor, be sure to use the appropriate adapter or voltage converter, if one is necessary.



Connecting the monitor cable and ADB cable

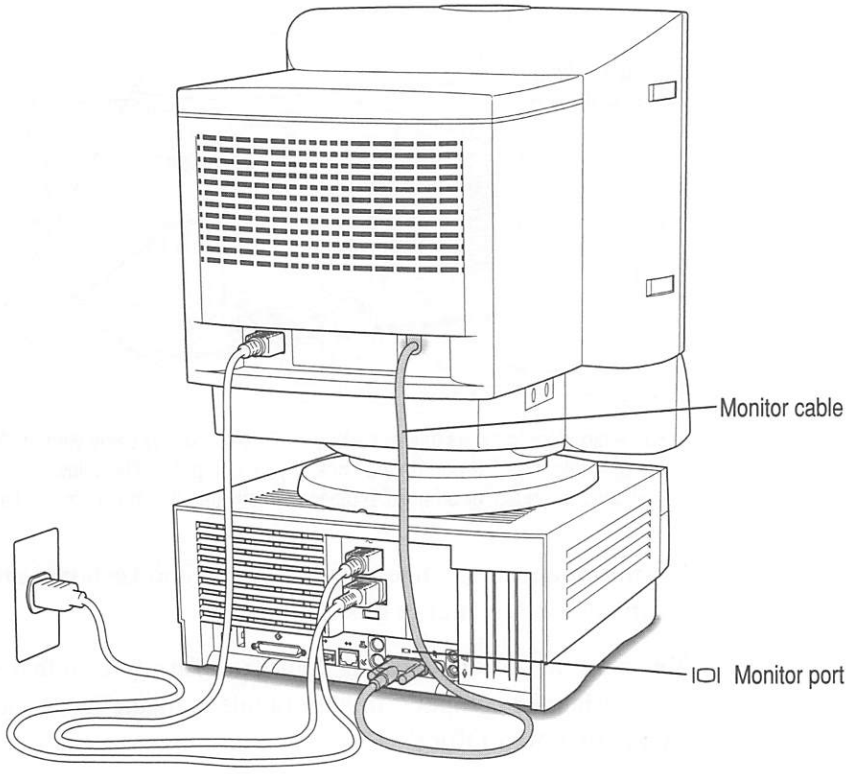
After you plug in the monitor power cord, you connect the monitor cable to the computer's monitor port. Some monitors also include a cable called an Apple Desktop Bus (ADB) cable, which you connect between the ADB ports (marked with the ⌁ icon) on the monitor and the computer.

To connect the monitor cable and the ADB cable, follow these steps:

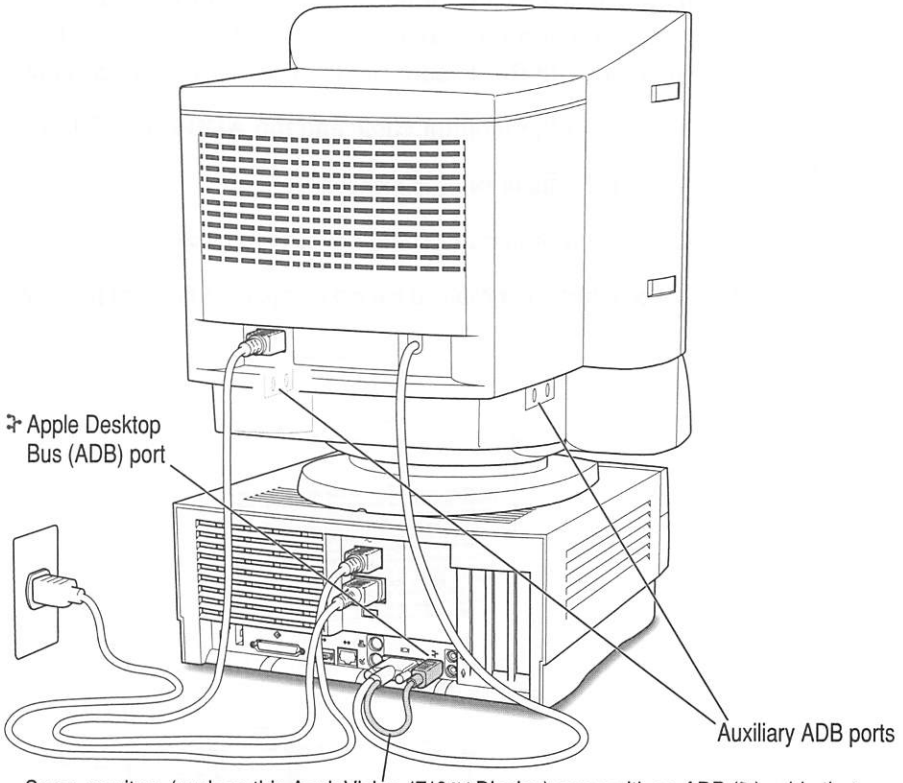
1 **Attach the monitor cable to the monitor.**

On some monitors, the cable is already attached.

2 **Attach the monitor cable to the monitor port on the back panel of the computer.**



3 **If your monitor came with an ADB cable, connect it according to the instructions that came with your monitor.**



Some monitors (such as this AppleVision 1710AV Display) come with an ADB (⌁) cable that you can plug into the ADB port on the back of your computer. This allows you to connect either a keyboard, a mouse, or other ADB device directly into the monitor's auxiliary ADB ports.

For information on connecting the mouse and keyboard and turning the computer on, see later in this chapter.

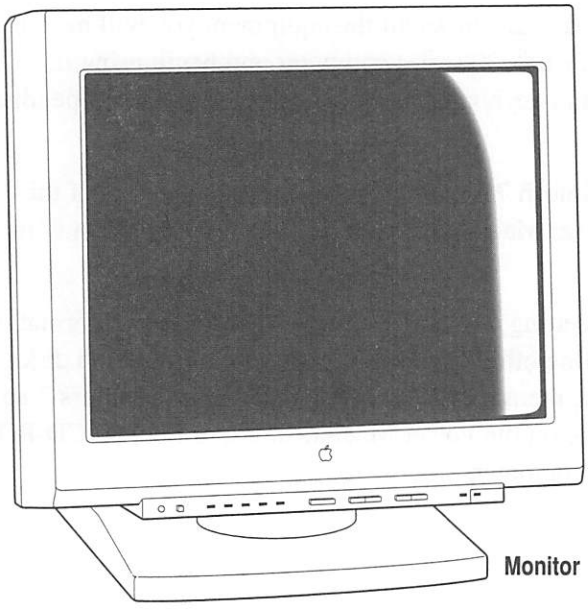
You can find tips on adjusting your work furniture so that you're comfortable when using the computer in later in this manual. See Appendix A, "Arranging Your Office".

Power Macintosh 8600 series computer

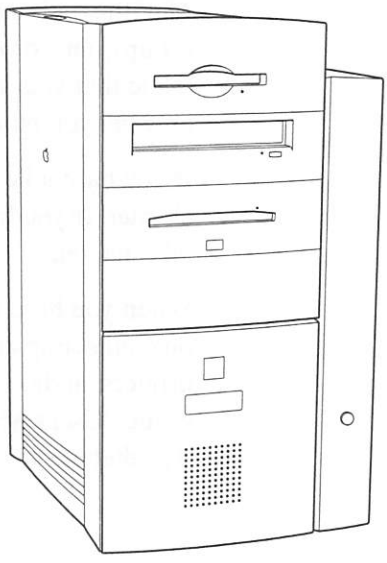
The illustration on the next page shows all the equipment you will need to set up your Power Macintosh 8600 series computer and begin using it. (Note that your monitor and keyboard may look slightly different depending on what you purchased.)

If you have a Power Macintosh 7300 series computer, see the start of this chapter. If you have a Power Macintosh 9600 series computer, see later in this chapter.

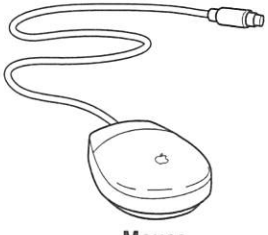
When you have finished setting up your computer, you can find information on connecting and installing other equipment (such as external hard disks, printers, audio equipment, memory, and expansion cards) in Chapters 7 and 8 of the "User's Manual" file on the Power Macintosh User's Manual CD-ROM disc that came with your computer.



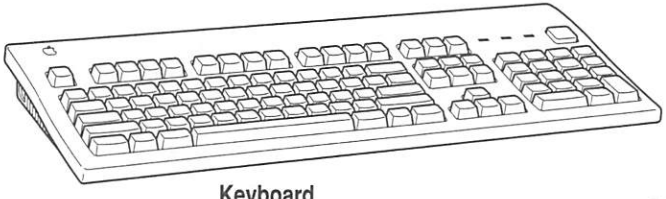
Monitor



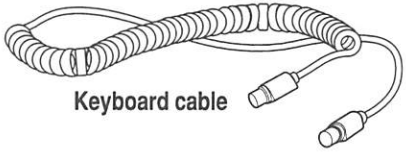
Macintosh computer



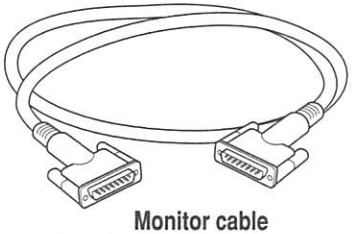
Mouse



Keyboard

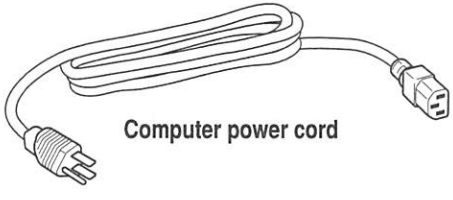


Keyboard cable

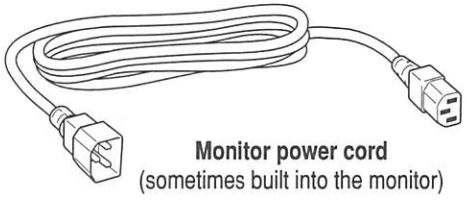


Monitor cable
(sometimes built into the monitor)

Apple PlainTalk Microphone (optional)



Computer power cord



Monitor power cord
(sometimes built into the monitor)

Positioning and plugging in the computer

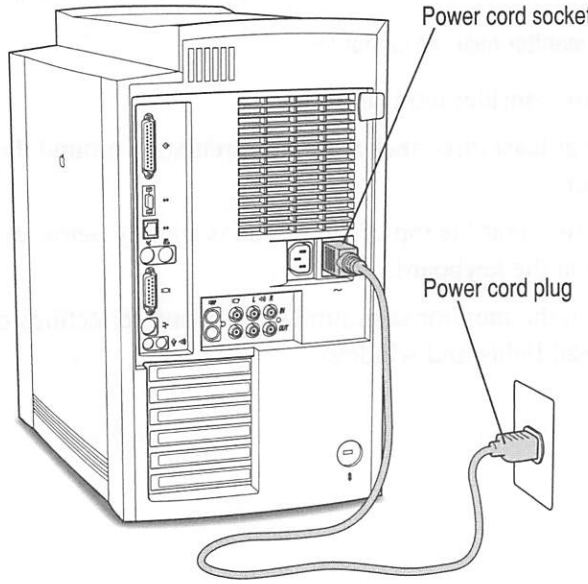
Place your equipment on a sturdy, flat surface near a grounded wall outlet. (Your computer was designed to be placed on the floor to conserve desk space, but it can also be placed on any stable, flat surface.)

Before you plug your Macintosh into a wall socket, carefully read all the setup instructions in this chapter. Then, before you connect any other equipment to your Macintosh, follow the instructions in this section to plug it in. The plug grounds the computer and protects it from electrical damage while you set up. When you are ready to begin, follow these steps:

1. **Plug the socket end of the computer's power cord into the recessed power socket (marked with the symbol ~) on the back of the computer.**

2. **Plug the other end of the power cord into a three-hole grounded outlet or power strip.**

WARNING This equipment is intended to be electrically grounded. Your Macintosh is equipped with a three-wire grounding plug—a plug that has a third (grounding) pin. This plug will fit only a grounded AC outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact a licensed electrician to replace the outlet with a properly grounded outlet. Do not defeat the purpose of the grounding plug!



IMPORTANT The only way to disconnect power completely is to unplug the power cord. Make sure that at least one end of the power cord is within easy reach so that you can unplug the computer when you need to.

Connecting a monitor

You can connect many types of monitors (often called displays) to your Macintosh computer, including most standard monitors. See the *Technical Information* booklet that came with your computer for a complete list.

This section contains instructions for connecting most types of monitors. You should also refer to the instructions that came with the monitor for any special instructions.

IMPORTANT If you are connecting an Apple monitor that has built-in speakers or a microphone, you may need to install monitor software after you have set up and turned on your computer. Otherwise, you may not be able to use all the monitor's features. See the instructions that came with the monitor for more information.

Connecting the monitor power cord

At minimum, monitors have two cords to connect: a power cord and a monitor cable. To connect the monitor power cord, follow these steps:

1 **Place the monitor near the computer.**

Keep these considerations in mind:

- Allow at least three inches for air circulation around the computer and monitor.
- Make sure that the top of the screen is slightly below eye level when you're sitting at the keyboard.
- Position the monitor to minimize glare and reflections on the screen from overhead lights and windows.

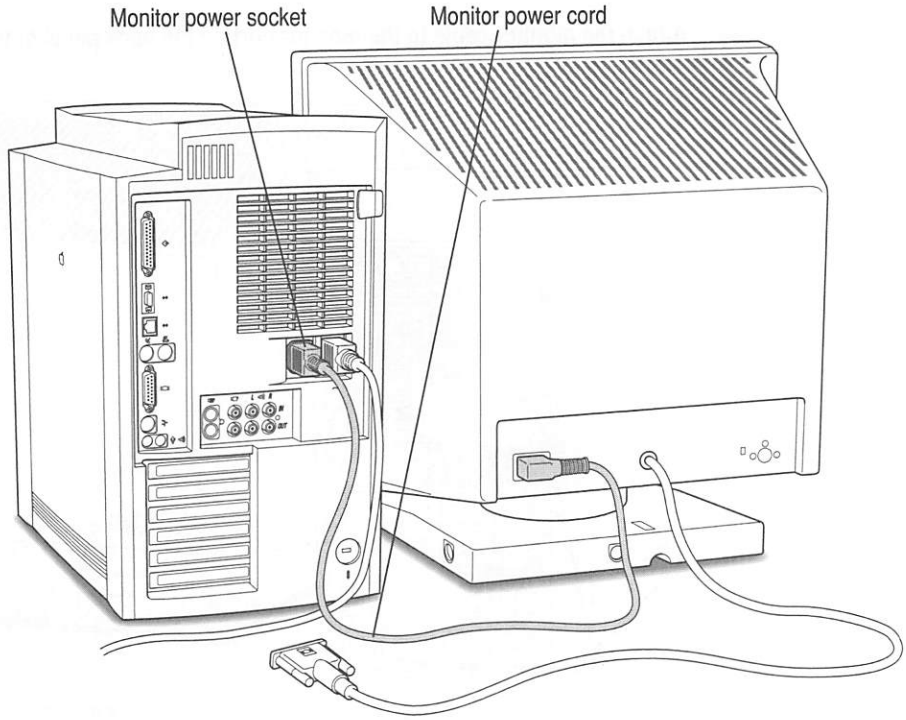
2 **Connect the monitor power cord to the monitor.**

On some monitors, the cord is already attached.

3 **Plug in the monitor power cord.**

Some monitor power cords are designed to plug into the back of your computer.

Some monitor power cords must be connected to a grounded electrical outlet, not to the computer. Check the information that came with the monitor.



Connecting the monitor cable and ADB cable

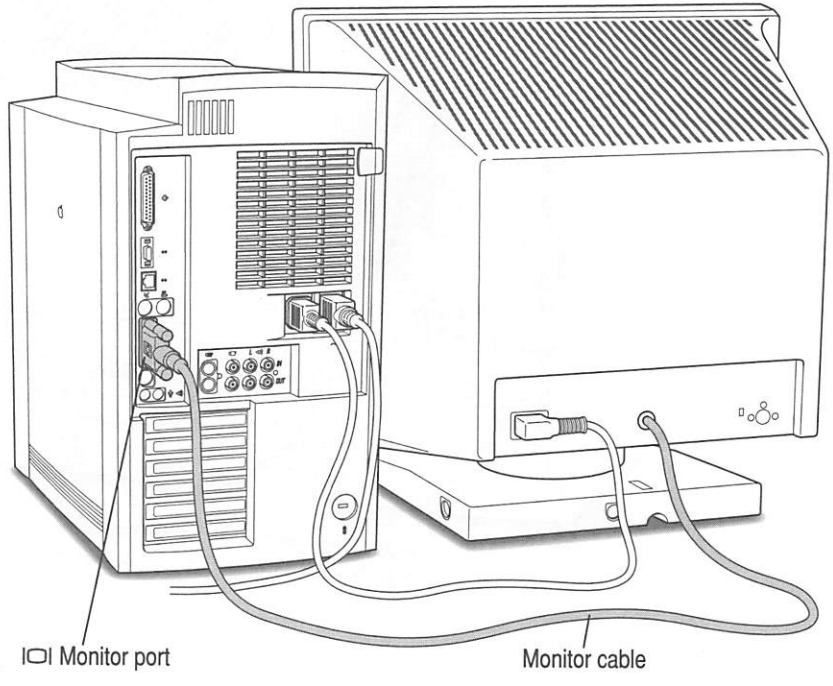
After you plug in the monitor power cord, you connect the monitor cable to the computer's monitor port. Some monitors also include a cable called an Apple Desktop Bus (ADB) cable, which you connect between the ADB ports (marked with the ⌁ icon) on the monitor and the computer.

To connect the monitor cable and the ADB cable, follow these steps:

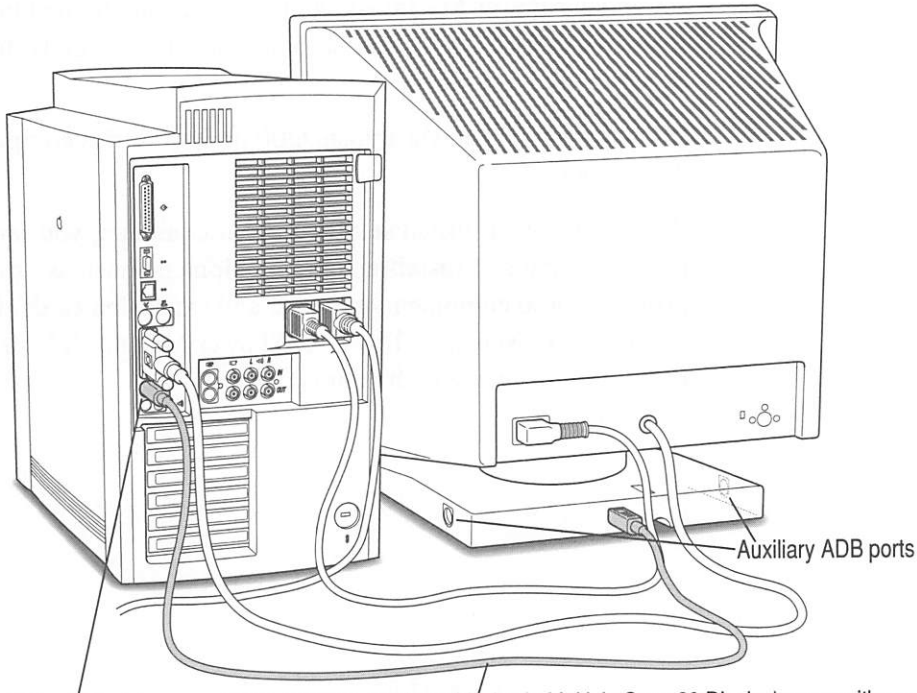
1 **Attach the monitor cable to the monitor.**

On some monitors, the cable is already attached.

2 **Attach the monitor cable to the monitor port on the back panel of the computer.**



3 **If your monitor came with an ADB cable, connect it between the ports marked with the ⌁ icon on the back of the computer and on the back of the monitor.**



Some monitors (such as this Apple Multiple Scan 20 Display) come with an ADB (⌁) cable that you can plug into the back of the monitor. The other end of this cable can be connected to your computer. This allows you to connect either a keyboard, mouse, or other ADB device directly into your monitor's auxiliary ADB ports.

For information on connecting the mouse and keyboard and turning the computer on, see later in this chapter.

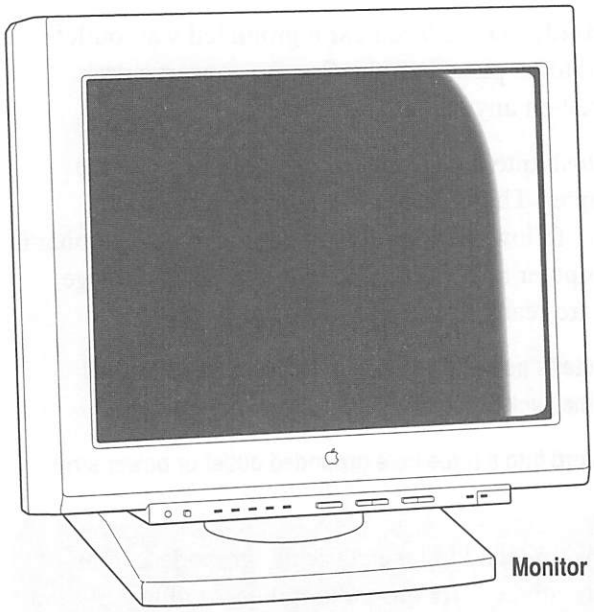
You can find tips on adjusting your work furniture so that you're comfortable when using the computer in later in this manual. See Appendix A, "Arranging Your Office".

Power Macintosh 9600 series computer

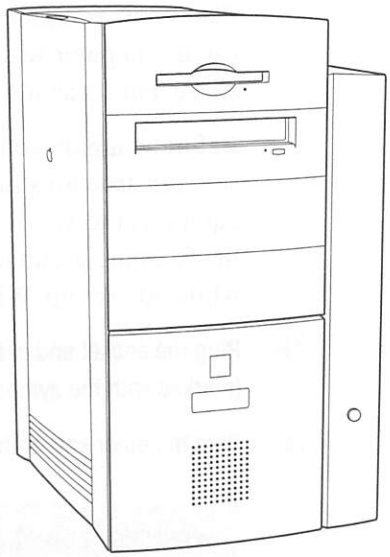
The illustration on the next page shows all the equipment you will need to set up your Power Macintosh 9600 series computer and begin using it. (Note that your monitor and keyboard may look slightly different depending on what you purchased.)

If you have a Power Macintosh 7300 or 8600 series computer, see earlier in this chapter.

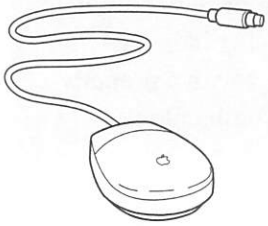
When you have finished setting up your computer, you can find information on connecting and installing other equipment (such as external hard disks, printers, audio equipment, memory, and expansion cards) in Chapters 7 and 8 of the "User's Manual" file on the "Power Macintosh User's Manual CD-ROM disc that came with your computer.



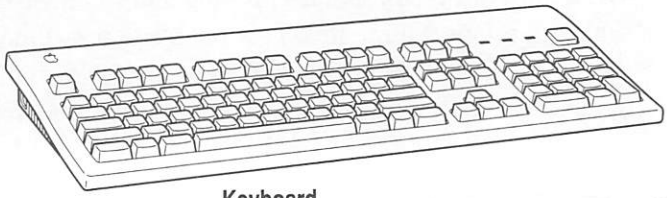
Monitor



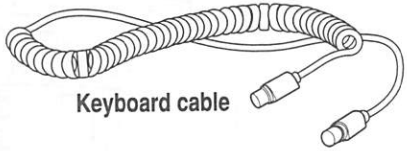
Macintosh computer



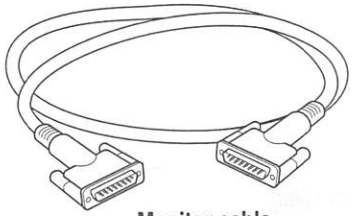
Mouse



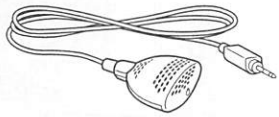
Keyboard



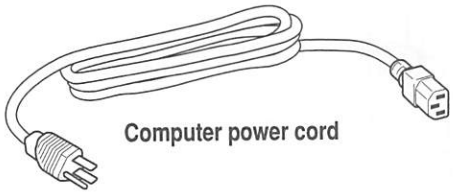
Keyboard cable



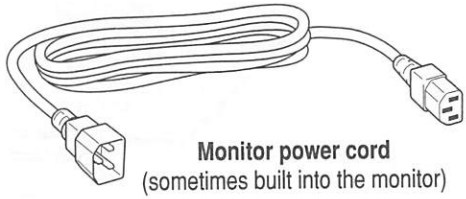
Monitor cable
(sometimes built into the monitor)



Apple PlainTalk Microphone (optional)



Computer power cord



Monitor power cord
(sometimes built into the monitor)

Positioning and plugging in the computer

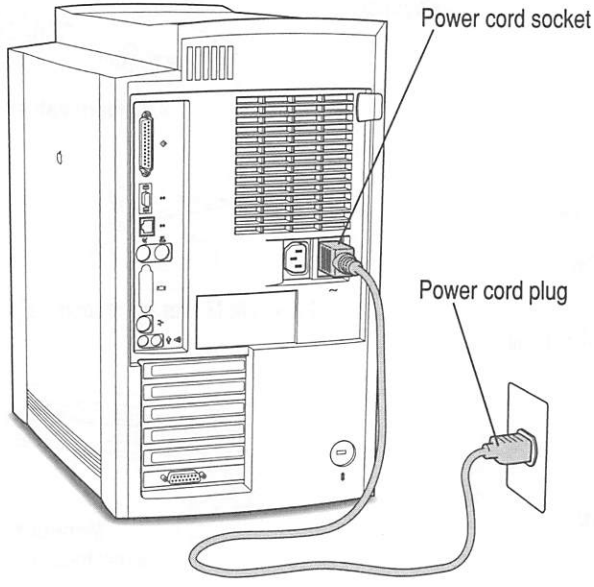
Place your equipment on a sturdy, flat surface near a grounded wall outlet. (Your computer was designed to be placed on the floor to conserve desk space, but it can also be placed on any stable, flat surface.)

Before you plug your Macintosh into a wall socket, carefully read all the setup instructions in this chapter. Then, before you connect any other equipment to your Macintosh, follow the instructions in this section to plug it in. The plug grounds the computer and protects it from electrical damage while you set up. When you are ready to begin, follow these steps:

1. **Plug the socket end of the computer's power cord into the recessed power socket (marked with the symbol ~) on the back of the computer.**

2. **Plug the other end of the power cord into a three-hole grounded outlet or power strip.**

WARNING This equipment is intended to be electrically grounded. Your Macintosh is equipped with a three-wire grounding plug—a plug that has a third (grounding) pin. This plug will fit only a grounded AC outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact a licensed electrician to replace the outlet with a properly grounded outlet. Do not defeat the purpose of the grounding plug!



IMPORTANT The only way to disconnect power completely is to unplug the power cord. Make sure that at least one end of the power cord is within easy reach so that you can unplug the computer when you need to.

Connecting a monitor

You can connect many types of monitors (often called displays) to your Macintosh computer, including most standard monitors. See the *Technical Information* booklet that came with your computer for a complete list.

This section contains instructions for connecting most types of monitors. You should also refer to the instructions that came with the monitor for any special instructions.

IMPORTANT If you are connecting an Apple monitor that has built-in speakers or a microphone, you may need to install monitor software after you have set up and turned on your computer. Otherwise, you may not be able to use all the monitor's features. See the instructions that came with the monitor for more information.

Connecting the monitor power cord

At minimum, monitors have two cords to connect: a power cord and a monitor cable. To connect the monitor power cord, follow these steps:

1 **Place the monitor near the computer.**

Keep these considerations in mind:

- Allow at least three inches for air circulation around the computer and monitor.
- Make sure that the top of the screen is slightly below eye level when you're sitting at the keyboard.
- Position the monitor to minimize glare and reflections on the screen from overhead lights and windows.

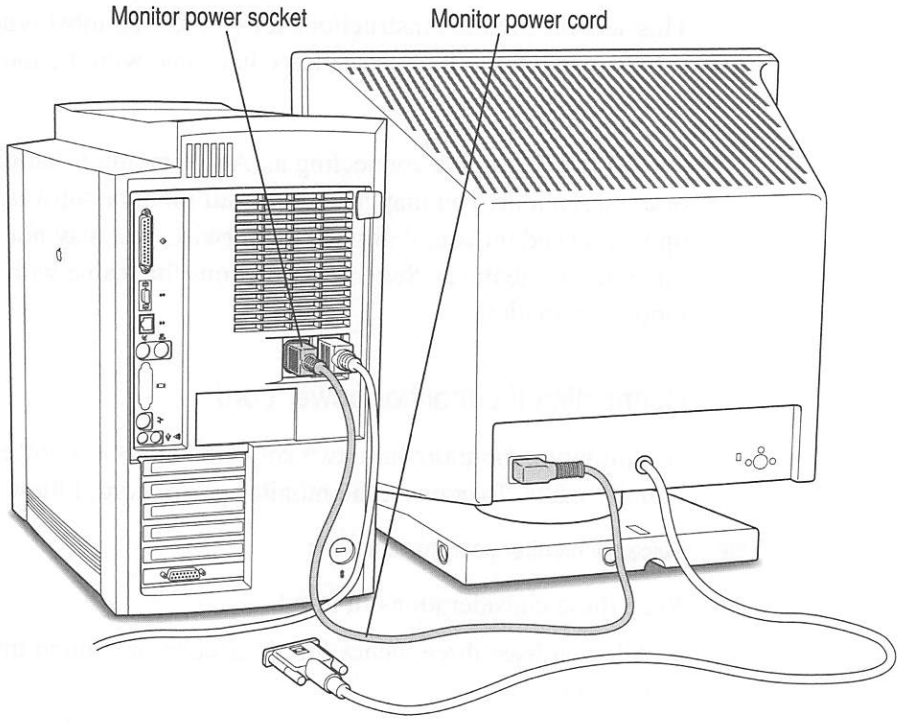
2 **Connect the monitor power cord to the monitor.**

On some monitors, the cord is already attached.

3 **Plug in the monitor power cord.**

Some monitor power cords are designed to plug into the back of your computer.

Some monitor power cords must be connected to a grounded electrical outlet, not to the computer. Check the information that came with the monitor.



Connecting the monitor cable and ADB cable

After you plug in the monitor power cord, you connect the monitor cable to the computer's monitor port. Some monitors also include a cable called an Apple Desktop Bus (ADB) cable, which you connect between the ADB ports (marked with the ⌁ icon) on the monitor and the computer.

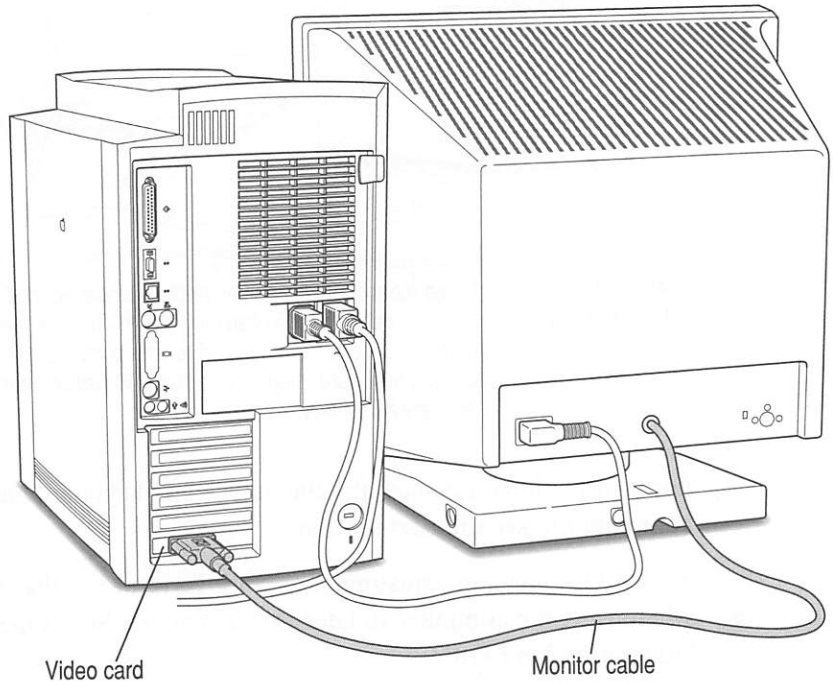
To connect the the monitor cable and the ADB cable, follow these steps:

1 **Attach the monitor cable to the monitor.**

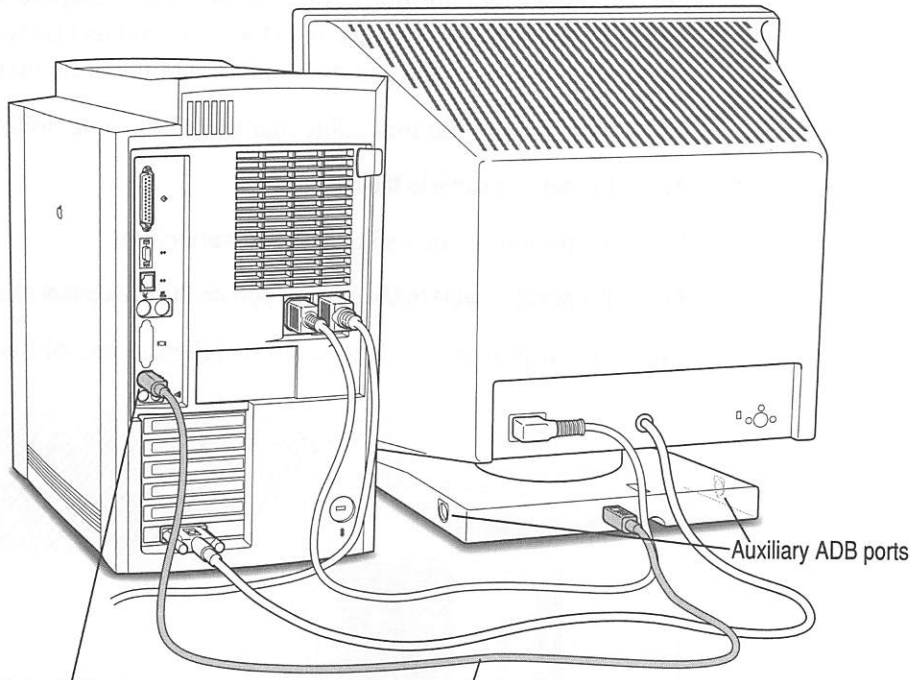
On some monitors, the cable is already attached.

2 **Attach the monitor cable to the monitor port on the back panel of the computer.**

The monitor port is on a video card installed in one of the PCI slots.



3 **If your monitor came with an ADB cable, connect it between the ports marked with the ⌁ icon on the back of the computer and on the back of the monitor.**



Some monitors (such as this Apple Multiple Scan 20 Display) come with an ADB (⌁) cable that you can plug into the back of the monitor. The other end of this cable can be connected to your computer. This allows you to connect either a keyboard, mouse, or other ADB device directly into your monitor's auxiliary ADB ports.

For information on connecting the mouse and keyboard and turning the computer on, see the next section.

You can find tips on adjusting your work furniture so that you're comfortable when using the computer in later in this manual. See Appendix A, "Arranging Your Office".

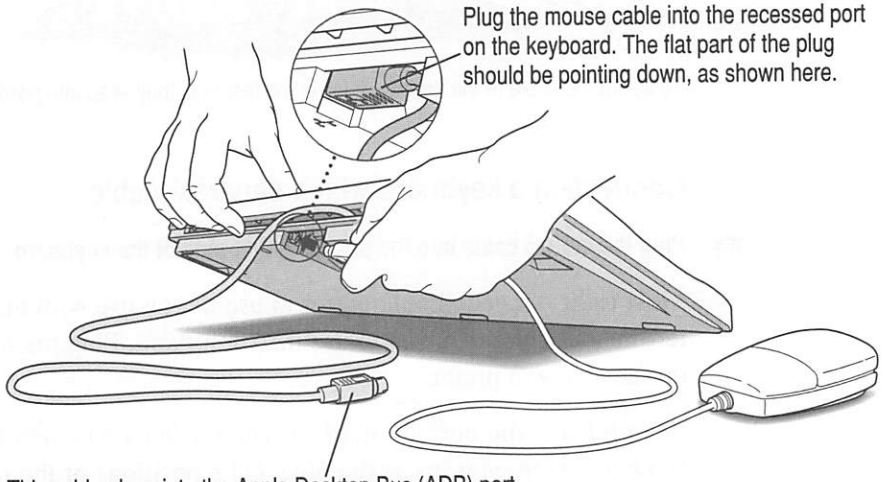
Connecting the mouse and keyboard

The way you connect the mouse and keyboard depends on whether the keyboard has a built-in cable or a separate cable.

Connecting a keyboard with a built-in cable

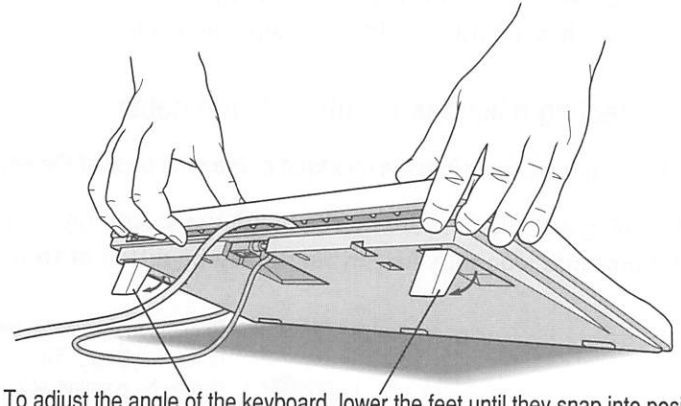
1 **Plug the mouse cable into the recessed port on the back of the keyboard.**

The plug and the port are marked with the ⌁ icon (symbol). The positions of the port and icon on your keyboard may be different from those pictured.


Plug the mouse cable into the recessed port on the keyboard. The flat part of the plug should be pointing down, as shown here.
This cable plugs into the Apple Desktop Bus (ADB) port, marked with the ⌁ icon, on the back of the computer.

2 **If the front or side of your monitor has a port marked with the ⌁ icon, plug the keyboard cable into this port. Otherwise, plug the keyboard cable into the port marked with the ⌁ icon on the back of the computer.**

3 **If you want to adjust the angle of the keyboard, lower its feet.**



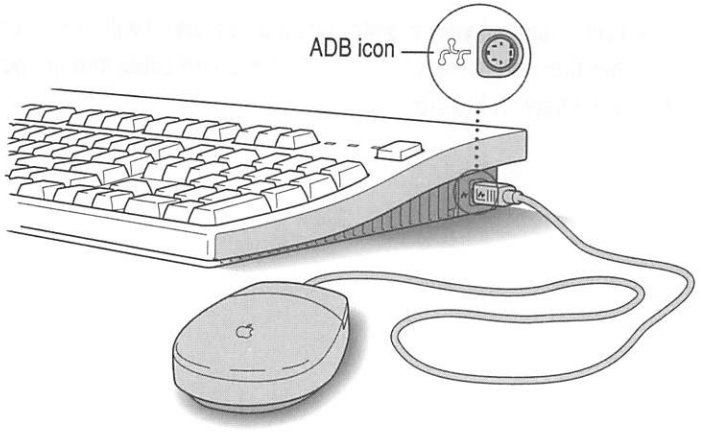
To adjust the angle of the keyboard, lower the feet until they snap into position.

Connecting a keyboard with a separate cable

1 **Plug the mouse cable into the port on either side of the keyboard.**

Most right-handed people prefer to use the mouse with their right hand; most left-handed people prefer to use their left hand. Plug the mouse into the port on the side you prefer.

The plug and the port are marked with the ⌁ icon (symbol). Align the symbols before you insert the plug. (The positions of the port and icon on your keyboard may be different from those pictured here.)

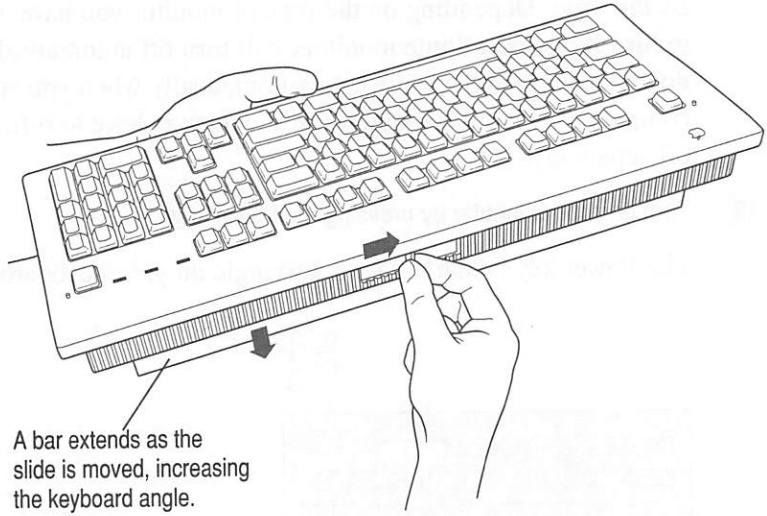


2 **Plug the keyboard cable (both ends are the same) into the other ADB port on the keyboard.**

If you plugged the mouse cable in on the right, for example, plug the keyboard cable in on the left.

3 **If the front or side of your monitor has a port marked with the ⌁ icon, plug the keyboard cable into this port. Otherwise, plug the keyboard cable into the port marked with the ⌁ icon on the back of the computer.**

4 **If you want to adjust the angle of the keyboard, slide the tab at the back of the keyboard.**



A bar extends as the slide is moved, increasing the keyboard angle.

Turning the computer on

To turn on the computer for the first time, follow these steps:

1 **Turn on your monitor.**

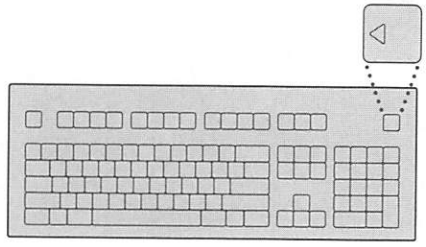
See the information that came with your monitor for the location of the power switch. On newer Apple monitors, the power switch is located on the front of the unit.

Note: You may not see the monitor power come on until you turn on the computer in the next step.

By the way: Depending on the type of monitor you have, you may only need to turn it on once. Some monitors will turn off automatically when you shut down the computer and turn on automatically when you start up the computer. With other monitor types, you may have to turn the monitor on or off separately.

2 **Turn on your computer by pressing the Power key.**

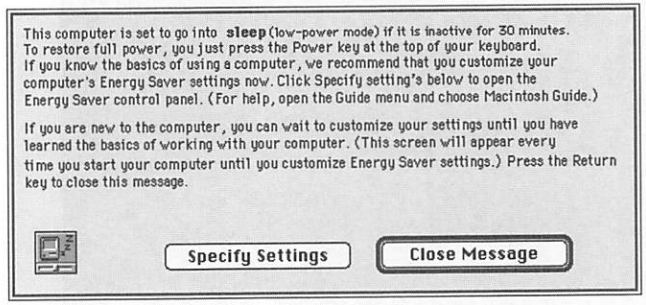
The Power key is marked with a triangle on your keyboard.



You should hear a tone from the computer as it starts up. If you don't, press the Power key again, and hold down the key a little longer this time.

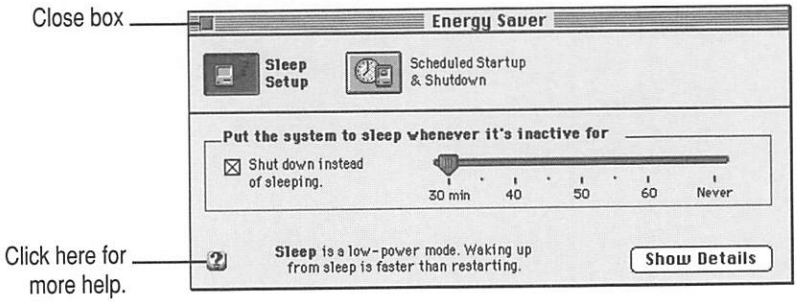
3 Check to see what's on your screen.

You'll see a sequence of messages describing what is happening, followed by the Energy Saver dialog box. (If your computer does not start up properly, see "Problems Turning Your Computer On?" next.)

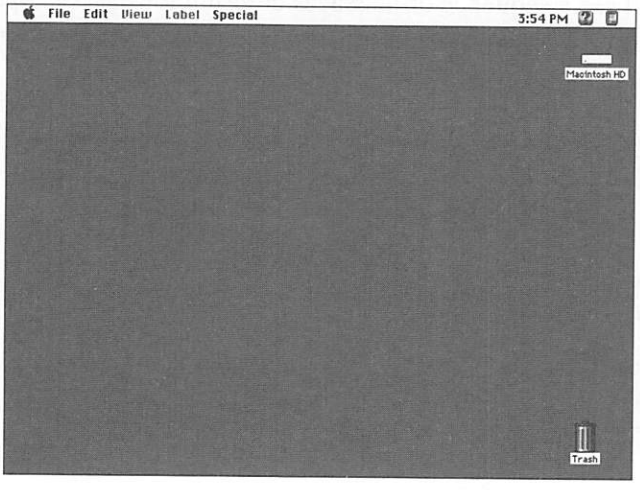

This computer is set to go into sleep (low-power mode) if it is inactive for 30 minutes.
To restore full power, you just press the Power key at the top of your keyboard.
If you know the basics of using a computer, we recommend that you customize your computer's Energy Saver settings now. Click Specify setting's below to open the Energy Saver control panel. (For help, open the Guide menu and choose Macintosh Guide.)
If you are new to the computer, you can wait to customize your settings until you have learned the basics of working with your computer. (This screen will appear every time you start your computer until you customize Energy Saver settings.) Press the Return key to close this message.
Specify Settings
Close Message

4 Do one of the following.

- If you're a beginning Macintosh user, press the Return key to close this dialog box. You can set your Energy Saver options later.
- If you're an experienced Macintosh user, you may want to set your energy-saving options now. Click Specify Settings to open the Energy Saver window. After you are done setting your energy-saving options, click the close box to close the Energy Saver window.



5 **If you see the Macintosh "desktop" (shown here), skip now to "What's Next?"**



IMPORTANT If you want to turn off your computer, be sure to follow the proper shutdown procedure explained at the end of Chapter 2, "Learning to Use Your Computer."

Problems turning your computer on?

If you don't see anything on your screen or you think your computer did not start up properly, check these items to see if you can identify the problem:

- Is the computer plugged into a power source? If it is plugged into a power strip, is the power strip turned on?
- Is the computer turned on? The power-on light on the front panel of the computer should be on. If it isn't, press the power button, which is also on the front panel.
- Are the keyboard and mouse cables connected correctly? (Don't connect or disconnect the keyboard or mouse cable while the computer is on. You could damage your equipment. To turn off your computer, press the power button on its front panel.)
- If you connected an ADB cable between the monitor and the computer, is it attached firmly to the ports marked with ⌁ icons? (Don't connect or disconnect this cable while the computer is on. You could damage your equipment. To turn off your computer, press the power button on its front panel.)
- Is the monitor power cord plugged in?
- Is the monitor cable—the one connected to the monitor port (|▭|) on your computer—attached firmly to both the monitor and computer?
- Is the monitor turned on? (Check the power-on light on the front of the monitor.)
- Is the brightness control on the monitor adjusted correctly? (On most monitors, the brightness control is marked with the symbol ☼.)
- Is the computer asleep? To wake the computer, press the Power key (marked with a ◁) on the keyboard. It may take a moment or two for the computer to wake up.
- If you see a blinking question mark, see Chapter 4, "Start Here If Trouble Occurs."

What's next?

Congratulations—you've finished setting up your computer.

If this is the first time you've used a Macintosh computer, continue now with Chapter 2, "Learning to Use Your Computer."

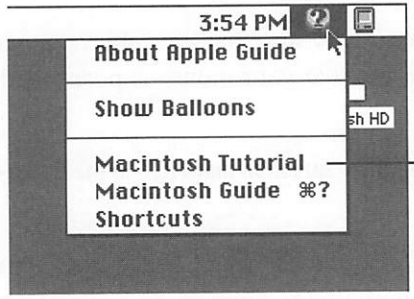
If you already know how to use a Macintosh computer, you might like to read the "Reviewing the basics" section in Chapter 2, or you can go directly to Chapter 3, "Working With The User's Manual CD".

IMPORTANT If you want to turn off your computer, be sure to follow the proper shutdown procedure explained at the end of Chapter 2, "Learning to Use Your Computer."

This chapter explains how to get help from the Guide (?) menu while using the computer, and how to find a tutorial that teaches you about your computer.

2 Learning to Use Your Computer

The Guide menu is your main source of information about your computer. The menu is identified by a question mark (?) in the upper-right corner of the screen.



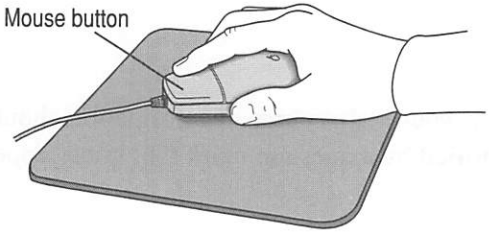
If you are new to the Macintosh, choose Macintosh Tutorial (sometimes called the Mac OS Tutorial) first. The tutorial lets you learn by doing—the fastest way to learn about your computer.

Follow the steps in the next section to choose the tutorial from the Guide menu.

To start the tutorial, follow these steps:

1 Slide your mouse along your mouse pad or desk.

Hold the mouse as shown, with the cable pointing away from you. Rest the heel of your palm on the desk and grasp the sides of the mouse as shown. Slide the mouse around with the index finger resting on the mouse button. Don't press the mouse button (under your index finger). Notice that the arrow (↖) on the screen moves in the same direction that you move the mouse.



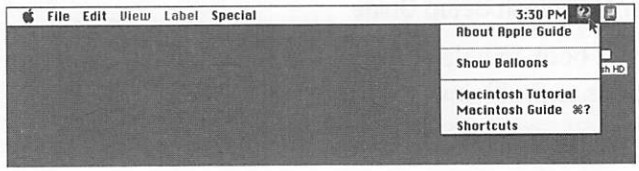
If the arrow doesn't move, make sure that the cables connecting the mouse and keyboard are secure and that your mouse is positioned as shown in the illustration.

2 Move the tip of the arrow (↖) to the question mark (?) in the upper-right portion of the screen.

If you run out of room on your mouse pad or desk while moving the mouse, pick it up and place it where there's more room. (The arrow on the screen moves only when the mouse is in contact with the mouse pad or desk.)

3 **With the tip of the arrow on the question mark, press and hold down the mouse button.**

A list of choices called a *menu* appears. This is the Guide (?) menu, which is the place to go when you have a question about how to use your computer.



4 **While holding down the mouse button, move the arrow until the words "Macintosh Tutorial" are highlighted, then release the mouse button. (On some computers you'll see Mac OS Tutorial instead of Macintosh Tutorial.)**

A window appears welcoming you to the tutorial. You can set this book aside for now and follow the instructions on the screen. When you have completed the tutorial, return to this book and read the next section, "After You Take the Tutorial."

IMPORTANT You can stop the tutorial at any point and resume it later. If you want to turn off your computer, however, be sure to follow the proper shutdown procedure explained at the end of this chapter.

After you take the tutorial

If you are comfortable with the basic skills taught in the tutorial, you are ready to use your computer. However, you may have additional questions. This book can answer some of them, but there are also many other convenient sources of information. The next section reminds you how to find answers you need.

Where to find answers

When you have questions about using your Macintosh, there are several places you can look for answers.

Power Macintosh Setup Guide

Use this book to help you set up your computer and begin using it, or to find solutions to problems.

Apple Guide

If you need help or experience a problem while using the computer, open the Guide (?) menu and choose Macintosh Guide (or Mac OS Guide). The Guide menu is the main source for information while you are using the computer.

Power Macintosh User's Manual

For information on installing and using software applications, communicating with other computers, or expanding your computer's capabilities, see the "User's Manual" file on the *Power Macintosh User's Manual* CD-ROM disc that came with your Macintosh.

Other manuals

For answers to questions about other equipment or about application programs you have purchased, see the manuals that came with the equipment or programs.

Apple's customer support hotline

If you can't find an answer in any of the materials provided, call the customer support hotline. (The phone number for the hotline is in the service and support information that came with your computer.)

Four simple tips for using Macintosh Guide effectively

1 **When you don't see Macintosh Guide (or Mac OS Guide) in the Guide menu**

Macintosh Guide (or Mac OS Guide) is only available while you're in the Finder, the system software program that creates and displays your Macintosh desktop. To go to the Finder, do one of the following.

- Click the desktop (the colored or patterned background area of your screen).
- Pull down the Application menu (to the right of the Guide menu) and choose Finder.

2 **When you can't find the information you need**

- In searching for help topics, use one of the three buttons at the top of the Guide's initial window by clicking them: Topics, Index, and Look For.
- If you're in a series of steps and want to return to the list of help topics, click the Topics button.

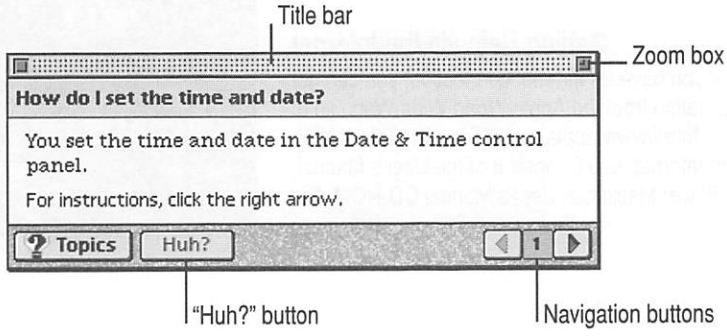
3 **When you can't see what's behind the Guide window**

Guide windows stay in front of other windows on the screen so that your instructions are never covered.

- Drag a Guide window by its title bar to move it out of the way.
- Click the zoom box once to shrink a Guide window. (To expand the window, click the zoom box a second time.)

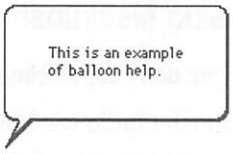
4 **When you need more information about an instruction or term**

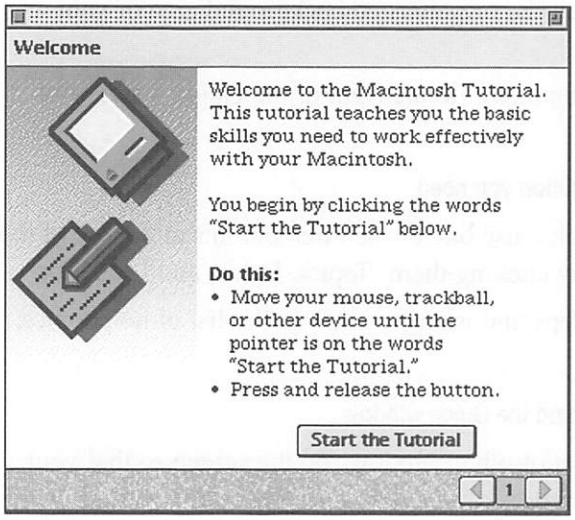
- Click the "Huh" button if it is available.

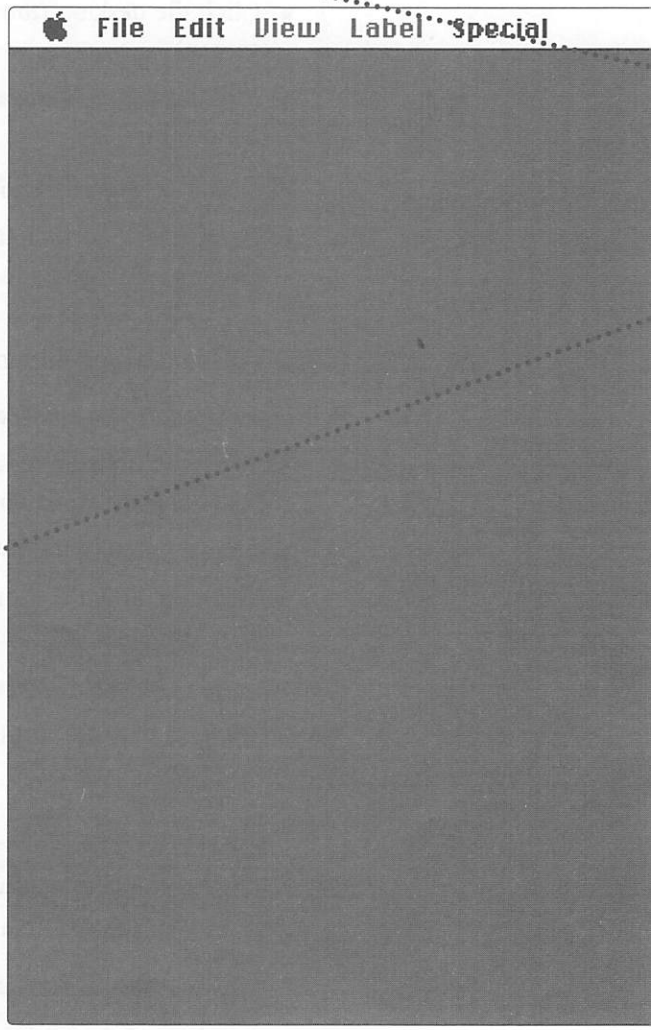


Identifying Objects

If you see something unfamiliar on the screen, open the Guide menu and choose Show Balloons. Then point to the object you want to identify. When you're done, choose Hide Balloons from the Guide menu.




Welcome
Welcome to the Macintosh Tutorial. This tutorial teaches you the basic skills you need to work effectively with your Macintosh.
You begin by clicking the words "Start the Tutorial" below.
Do this:
• Move your mouse, trackball, or other device until the pointer is on the words "Start the Tutorial."
• Press and release the button.
Start the Tutorial
1

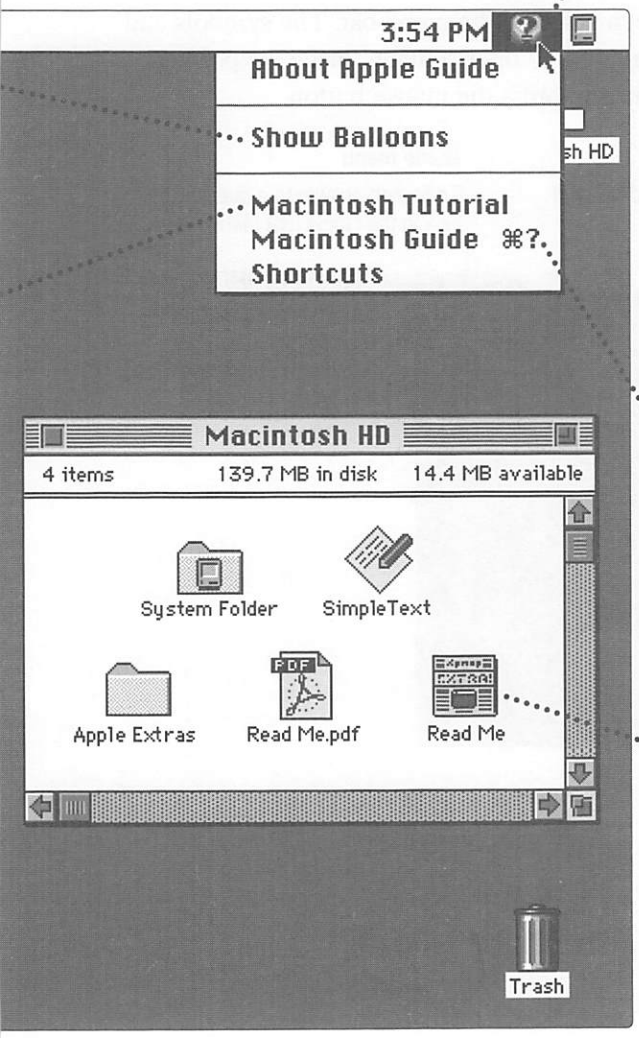


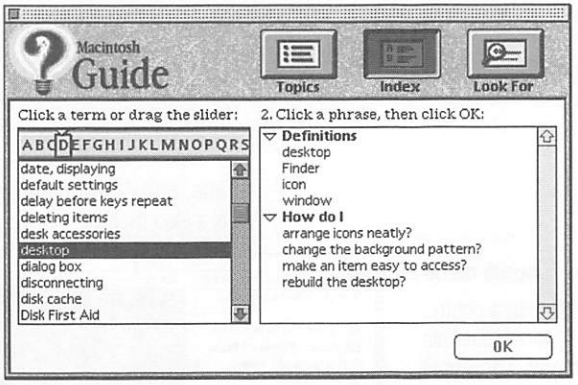
Learning the Basics

To learn basic skills, open the Guide menu and choose Macintosh Tutorial. Then follow the instructions on the screen.

Getting Help via the Internet

If you have an Internet connection, you can get information from the Apple World Wide Web site at http://www.apple.com. (For more information about the Internet, see Chapter 6 of the User's Manual, on the Power Macintosh User's Manual CD-ROM disc that came with your computer.)





The Guide Menu

To find an answer to a question, look in the Guide (?) menu—your main source of information about your computer.

Getting Answers to Your Questions

To get answers to questions you have while working with your computer, open the Guide menu and choose Macintosh Guide (or Mac OS Guide) or a Guide for the program you are using. Then click one of the three buttons at the top of the window: Topics, Index, or Look For, and follow the instructions to choose a subject.

Getting the Latest News

Double-click the hard disk icon to see the "Read Me" file pictured here, which contains last-minute tips and news. Many other Read Me documents are in the Apple Extras folder.

A document that has "pdf" in the icon or in the file name, has been created with Adobe Acrobat software. The Adobe Acrobat Reader program, which is used to read pdf files, has already been installed on your computer. To read a pdf file, simply double-click the file icon.

Reviewing the basics

Use the following illustrations to review the onscreen elements you use to work with your computer.

Menus

The strip across the top of the screen is called the menu bar. The symbols and words in it contain menus of commands. To open a menu, place the pointer on the symbol or word for the menu and press the mouse button.

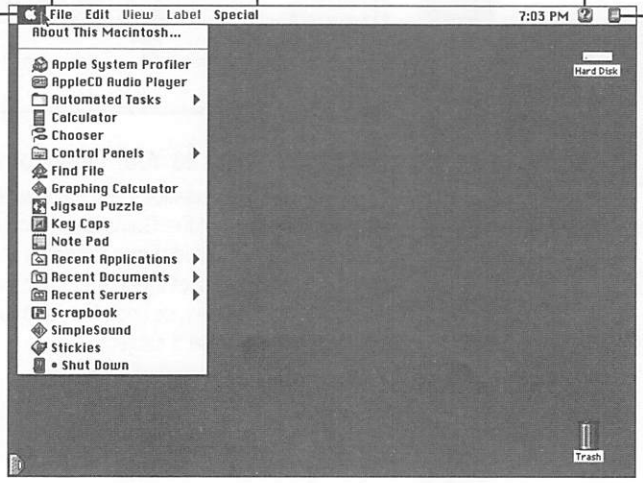
Guide menu

To find an answer to a question, look in the Guide (?) menu.

File, Edit, View, Label, and **Special** are also menus.

Apple menu

To choose a control panel, use this menu. The Apple menu also contains several useful programs and folders.

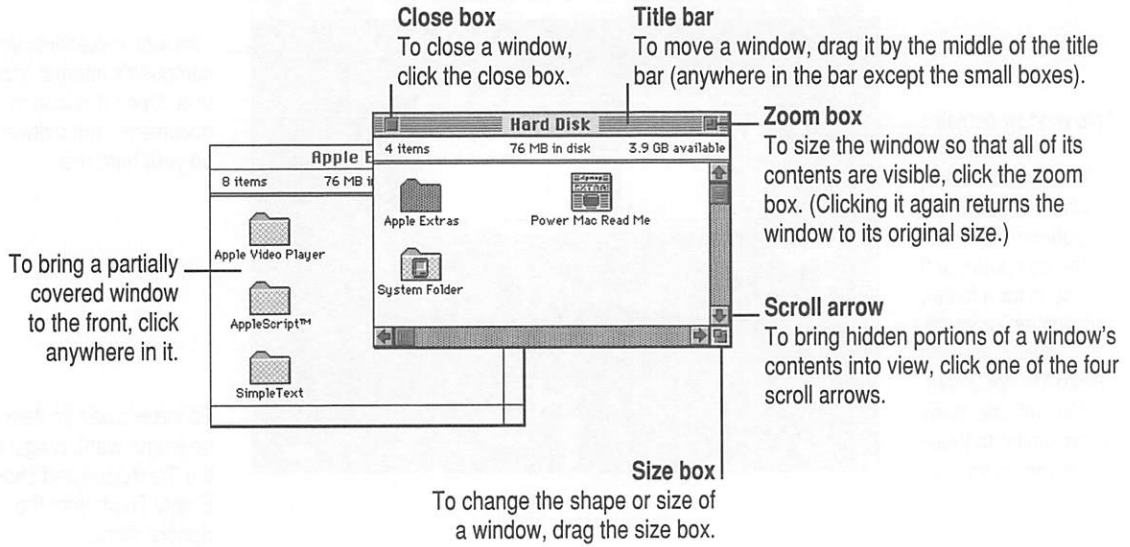


Application menu

To see which program is active or to switch to another program, use this menu.

Windows

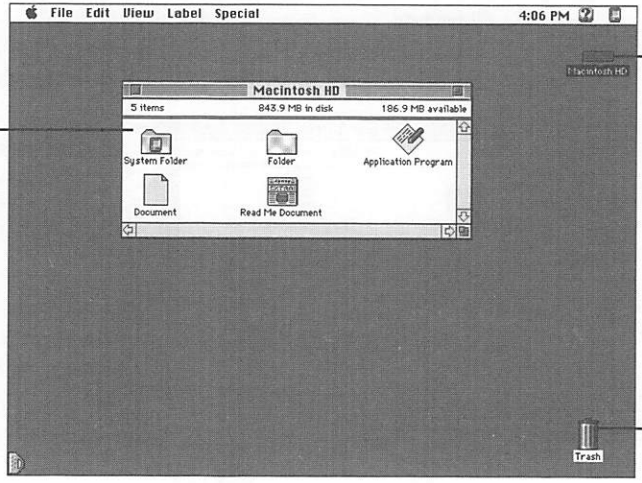
Windows are boxes that display text, graphics, or icons. To change the shape or position of a window, or to close a window, use the elements shown here.


Close box
To close a window, click the close box.
Title bar
To move a window, drag it by the middle of the title bar (anywhere in the bar except the small boxes).
Hard Disk
4 items
76 MB in disk
3.9 GB available
Apple Extras
Power Mac Read Me
System Folder
Zoom box
To size the window so that all of its contents are visible, click the zoom box. (Clicking it again returns the window to its original size.)
8 items
Apple Video Player
AppleScript™
SimpleText
To bring a partially covered window to the front, click anywhere in it.
Scroll arrow
To bring hidden portions of a window's contents into view, click one of the four scroll arrows.
Size box
To change the shape or size of a window, drag the size box.

Icons

Icons are small pictures that represent disks, programs, documents, and folders. You can double-click any icon to open it and see what it contains.

This window contains several icons: the System Folder, which contains the software that runs the computer, and icons for a folder, application program, document, and Read Me document. You will see many icons similar to these on your computer.



This icon represents your computer's internal hard disk. Open this icon to see documents and software on your hard disk.

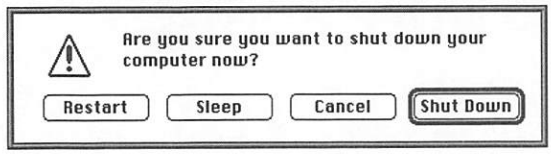
To throw away an item you no longer want, drag it to the Trash icon and choose Empty Trash from the Special menu.

Turning the computer off

To turn your computer off, follow these instructions:

1 **Press the Power key (◁) on your keyboard.**

The following dialog box appears on the screen:



2 **Press the Return key on the keyboard (or click the Shut Down button in the dialog box).**

You will be prompted to save any unsaved work before the computer shuts down.

To turn the computer on again, just press the Power key on the keyboard.

Note: In the Finder, you can also turn your computer off by choosing Shut Down from the Special menu.

This chapter explains how to load, open, and use the User's Manual CD-ROM disc that came with your computer.

3 Working With The User's Manual CD-ROM Disc

If you have followed the instructions in Chapter 1 to set up your computer and used Chapter 2 to become familiar with the basics of using your Macintosh, you're now ready to work with the "User's Manual" file on the *Power Macintosh User's Manual* CD-ROM disc that came with your computer.

You can read the User's Manual on your screen, or you can print the pages you want to study.

IMPORTANT If you intend to connect additional equipment to your computer, or you want to install PCI Expansion Cards or additional memory, you will need to shut down Macintosh to do so. Make sure you print the appropriate chapters of the User's Manual file before you begin.

The User's Manual is a Portable Document Format (PDF) file which was created using Adobe Acrobat software. You'll use Acrobat Reader to read the User's Manual PDF file. Acrobat Reader is already installled on your computer, so all you need to do is double-click on the "User's Manual" file icon when you open the *Power Macintosh User's Manual* CD-ROM disc.

The User's Manual file contains much of the information included in this Setup Guide. In addition, it contains detailed information on:

- installing and using software
- connecting your computer to a telephone line
- connecting your computer to a network
- using an Online Service or the Internet
- connecting additional equipment
- installing PCI Expansion Cards and additional memory
- health, safety, and maintenance tips
- special keys on your keyboard
- using the internal Zip drive (Power Macintosh 8600 series only).

If you have never used a CD-ROM player on a computer before, the next section, "Loading the User's Manual CD-ROM disc", tells you how to do so.

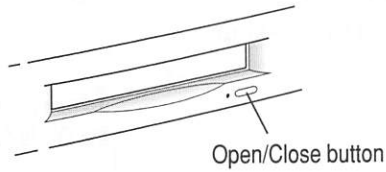
If you already know how to load a CD-ROM disc, skip to Step 5 of the next section, "Loading the User's Manual CD-ROM disc".

Loading the User's Manual CD-ROM disc

Follow these instructions to insert the *Power Macintosh User's Manual* CD-ROM disc into your computer's CD-ROM player.

1 **Start up your Macintosh computer, if it's not already on.**

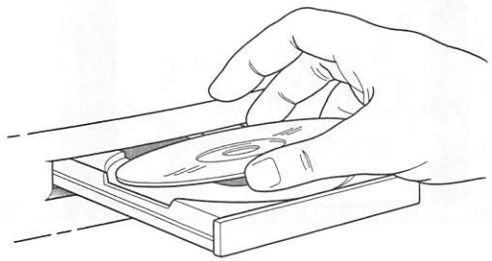
2 **Press the Open/Close button to open the tray of the CD-ROM player.**



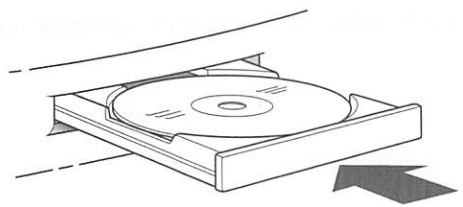
The tray opens.

3 **Place the *Power Macintosh User's Manual* CD-ROM disc in the tray, with the disc label facing up.**

Make sure the disc is lying flat and centered in the tray.



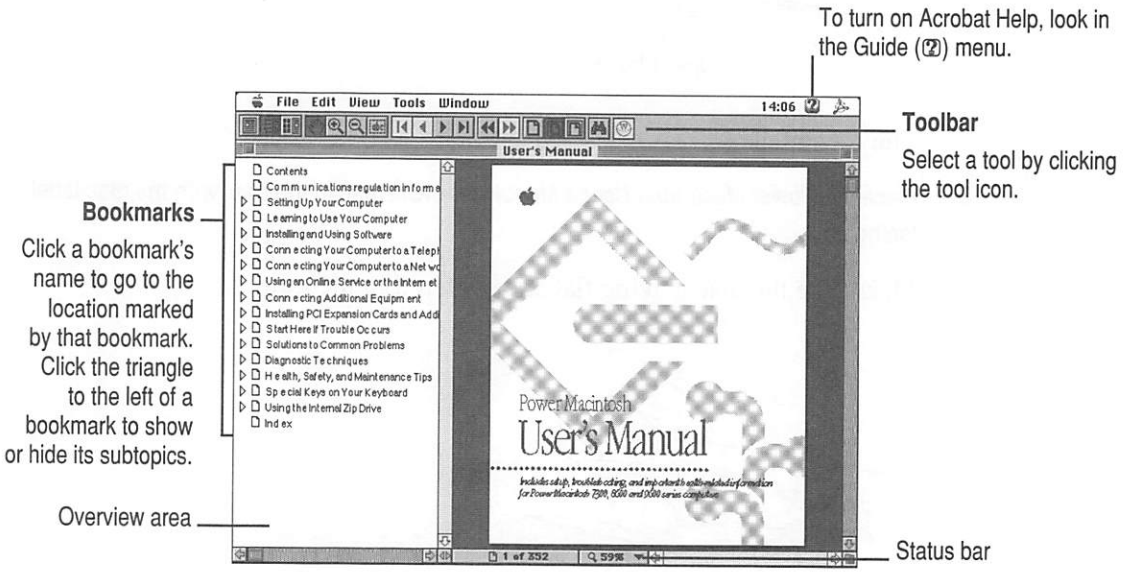
4 **Push the tray in, or press the Open/Close button, to close the tray.**



In a few moments, a CD icon appears on the desktop. and a window containing the User's Manual file icon opens automatically.

5 **Double-click the icon of the User's Manual file to open it.**

Acrobat Reader launches automatically and opens the file. In a few moments, a window like this opens on the desktop:


To turn on Acrobat Help, look in the Guide (?) menu.
Toolbar
Select a tool by clicking the tool icon.
Bookmarks
Click a bookmark's name to go to the location marked by that bookmark. Click the triangle to the left of a bookmark to show or hide its subtopics.
Overview area
Status bar
File Edit View Tools Window
14:06
User's Manual
Contents
Setting Up Your Computer
Learning to Use Your Computer
Installing and Using Software
Start Here If Trouble Occurs
Solutions to Common Problems
Diagnostic Techniques
Special Keys on Your Keyboard
Index
Power Macintosh
User's Manual
1 of 252
59%

If you already know how to use Acrobat Reader, you can start exploring the User's Manual file now.

If you have never used Acrobat Reader before, continue with this chapter to learn how to use it.

Using Acrobat Reader

The toolbar along the top of the screen contains several tools and buttons for navigating through documents, and setting up views that suit your needs.

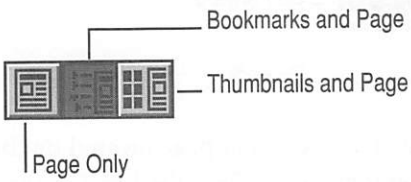
Page Views

You can view a file in a number of different ways:

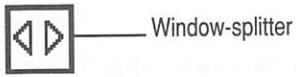
The **Page Only** button closes the overview area of the window.

The **Bookmarks and Page** button opens the overview area and shows any bookmarks created for the document.

The **Thumbnails and Page** button opens the overview area and shows thumbnail images of each document page



You can change the width of the overview area by dragging the Window-Splitter in the status bar at the bottom of the window.



Navigation Buttons

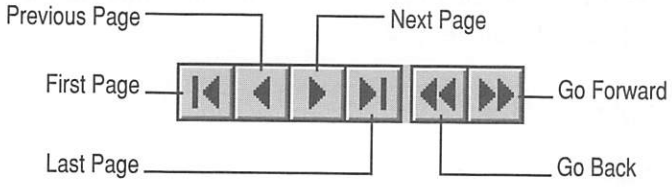
Navigation buttons let you move around the manual easily.

Use the **First Page** button to go to the start of the document.

Use the **Last Page** button to go to the end of the document.

Use the **Previous Page** button to go back one page in the document, and the **Next Page** button to go forward one page.

Use the **Go Back** and **Go Forward** buttons to retrace your steps in the document, moving to each of the locations in the order you visited them.



Use the **Hand** tool to move a document page around on the screen when it does not fit within the window area. Drag the hand in the direction you want to move the page.

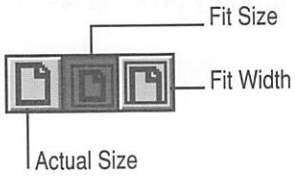
When you see Underlined Text, it indicates a link to another part of the manual. For example, entries in the Index are linked to their topics within the manual, making it very easy to find specific information when you need it.

Page Size Buttons

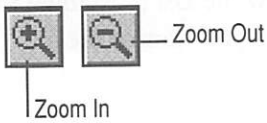
The **Actual Size** button displays the page at 100 %.

The **Fit Size** button scales the page to fit within the window.

The **Fit Width** button scales the page to fill the width of the window.



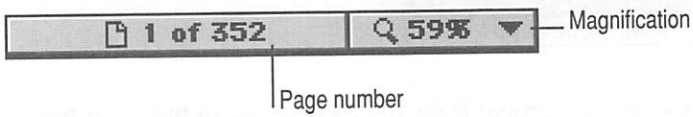
The **Zoom In** and **Zoom Out** tools give you an enlarged or reduced view of any item on a page.



The Status bar

The **page number** box shows the current page number. Click the page number box to display the Go To Page dialog box.

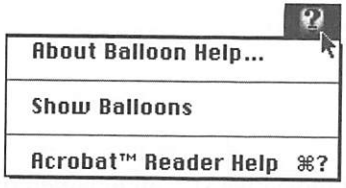
The **magnification** box shows the current page magnification



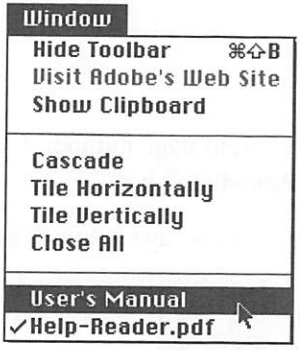
Acrobat Help

If you want to know more about Acrobat Reader, you can turn on the program's Online Help and refer to it while you're working. Acrobat Reader must be open before you can turn on Help.

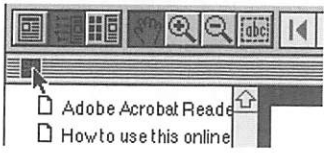
Pull down the Guide menu and choose Acrobat Reader Help. (You can also open Acrobat Reader Help at any time, by pressing ⌘–?.)



When the Help file opens, its window covers up the document you are reading. To switch windows and view the User's Manual file again, pull down the Window menu and select the file you want to view.



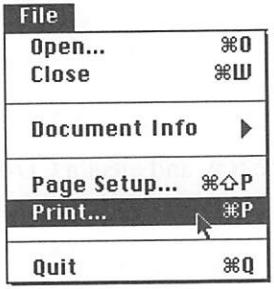
Close the Acrobat Help file by clicking in the close box,



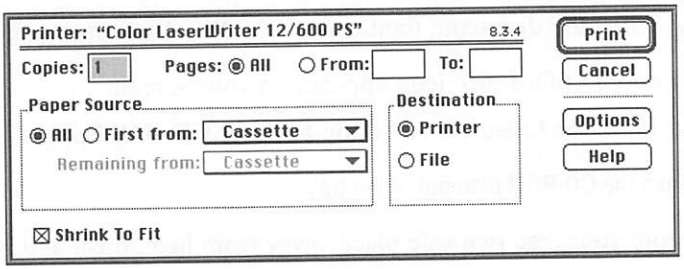
Printing

If you want to print a page, a range of pages, or the whole manual, follow these steps:

1. **Identify the range of pages you want to print.**
2. **Go to the File menu and select Print (or press ⌘–P).**



The following dialog box appears on the screen (depending on the kind of printer you have, the dialog box may look slightly different):



3. **If you want more than one copy, change the number in the Copies field to the number you want.**
4. **Enter the range of pages you want to print, in the From and To fields.**

   If you want to print the entire file, leave the From and To fields empty.

5. **Click Print.**

   Your file is printed.

Closing the User's Manual file

When you want to close the User's Manual file, pull down the File menu and select Quit (or press ⌘–Q). This closes the User's Manual file and quits Acrobat Reader at the same time.

If you simply want to close the User's Manual file but leave Acrobat Reader running, click the close box in the top left corner of the User's Manual file window,

Ejecting a CD-ROM disc

Follow these instructions to open the tray and eject a CD-ROM disc from your computer.

1 **Open the tray.**

There are several ways to open the tray of your CD-ROM player.

If a CD-ROM disc icon appears on your screen:

- Select the disc icon on your screen and drag the icon to the Trash.
- Click the disc icon, then choose the Put Away command in the File menu.

If no CD-ROM disc icon appears on your screen:

- Press the Open/Close button for your CD-ROM player.

2 **Take the CD-ROM disc out of the tray.**

Store your disc in a safe place, away from heat, dust, and moisture.

3 **Push the tray in, or press the Open/Close button, to close the tray.**

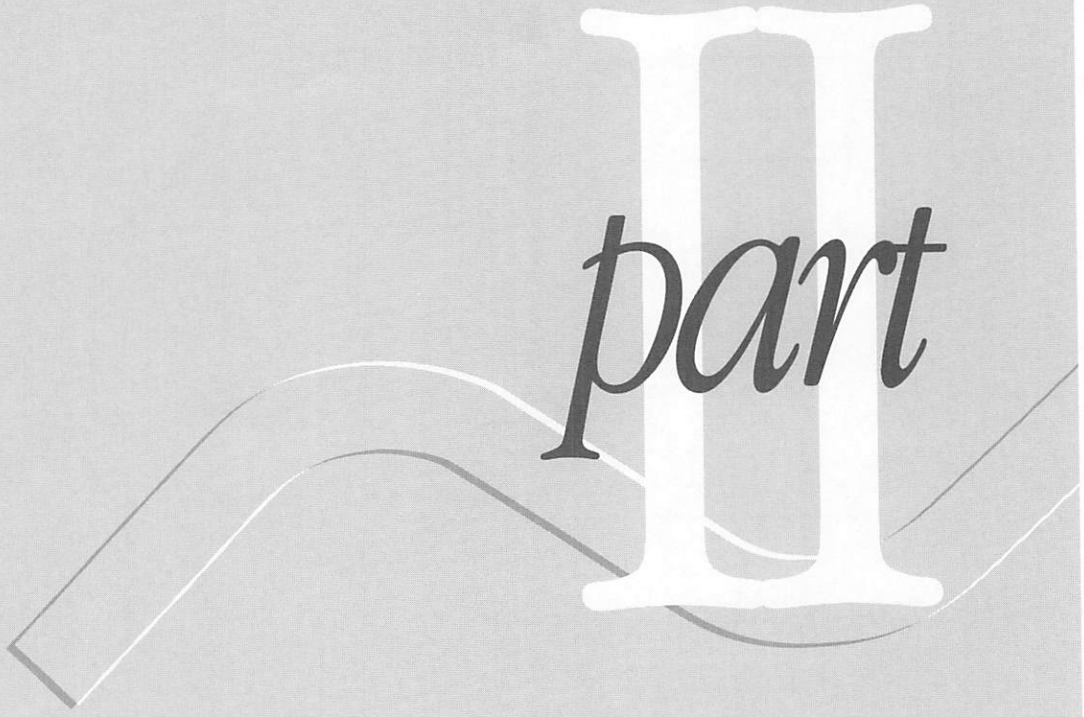
To avoid possible damage to the tray or the CD-ROM player, keep the tray closed when you are not using it.

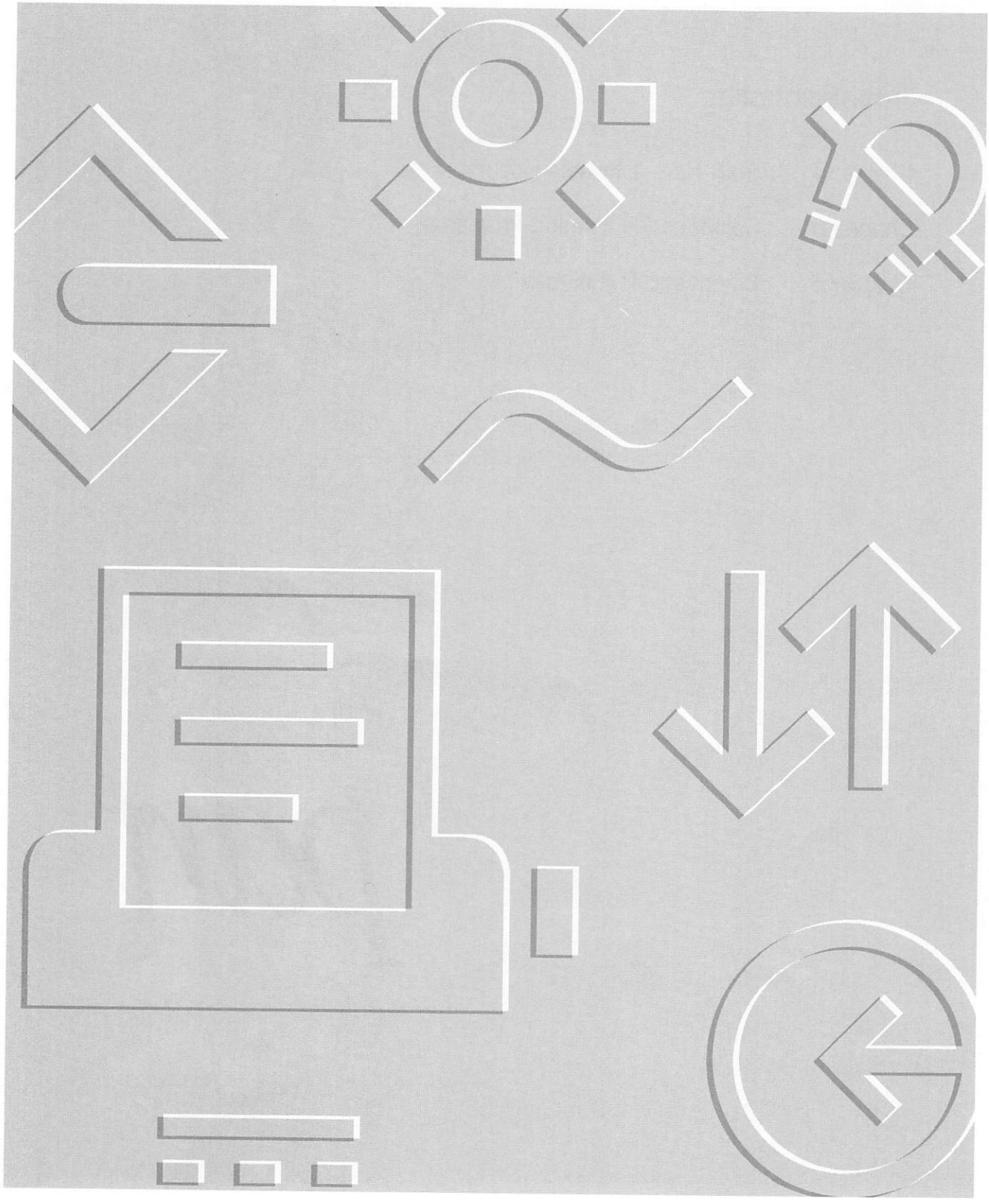
Troubleshooting

Chapter 4 Start Here if Trouble Occurs

Chapter 5 Solutions to Common Problems

Chapter 6 Diagnostic Techniques





Consult this chapter and Chapter 5 to solve problems with your computer and its system software before you call Apple for assistance.

4 Start Here If Trouble Occurs

Your computer came with a booklet that describes the service and support options that are available from Apple. It contains phone numbers you can call if you have trouble with your computer and also describes many other ways of obtaining support information from online services, the Internet, and automated fax services.

Before you contact Apple for assistance with your computer, however, follow the advice in this chapter and Chapter 5. You'll find you can solve most problems with your computer on your own.

This chapter outlines the best general method for solving problems, and Chapter 5 gives advice about how to solve specific problems.

Step 1: Gather as much information as you can

When you see an error message, you don't have to take action immediately. The message stays on the screen until you click the OK (or Restart) button or turn off the Macintosh.

- Make a note of exactly what you were doing when the problem occurred. Write down the message you see on the screen and its ID number (if any).
- List the programs you were using and the names of any items you know have been added to the System Folder since the system software was installed. This information will help a service person diagnose the problem, if you need to call later.
- Check the screen for any clues. Is a menu selected? What programs and document icons are open? Note anything else that seems relevant.
- If you were typing text and were not able to save it before the problem occurred, write down the parts of the text still visible on the screen so that some of your work will be easy to replace.
- Ask other Macintosh users about the problem you're having; they may have a solution for it.

Step 2: Restart your computer

Often you can eliminate a problem simply by restarting your computer, which clears the computer's memory.

To restart your Macintosh when you are having trouble, try the following steps:

1 **If you can, save any open documents before restarting.**

If your system is frozen and does not respond to anything you do, or if you have a "bomb" message on the screen, saving may not be possible. You can try pressing ⌘-period to cancel the current operation; if this works, you can then save the open documents before restarting.

2 **If you can, choose Restart from the Special menu or from the dialog box that's on screen.**

Dialog boxes contain messages from the computer. If something goes wrong, a message may appear on the screen asking you to restart.

3 **If you can't choose Restart, press the Power key (marked with a ◁) on the keyboard.**

Click Restart in the dialog box that appears.

4 **If the Power key doesn't work, hold down the ⌘ and Control keys while you press the Power key.**

This key combination restarts the computer. (Use this key combination only when you can't choose Restart from the Special menu or restart the computer using the Power key.)

5 **If your computer still doesn't restart, press the power button on the front of the computer to turn it off, wait at least 10 seconds, and turn it on again by pressing the Power key on the keyboard.**

If you suspect that the problem is with other equipment, such as a printer or an external hard disk that's attached to your computer, turn that equipment off for 10 seconds or longer while your computer is off, then turn the equipment on again and restart the Macintosh.

Step 3: Check onscreen help, if you can

Macintosh Guide (or Mac OS Guide on some systems) contains some troubleshooting information that is not included in this user's manual. If you are able to start up your computer properly, choose Macintosh Guide (or Mac OS Guide) from the Guide (?) menu; click the Guide's Topics button, and choose Troubleshooting from the list.

Step 4: Check the next chapter, "Solutions to Common Problems"

You can probably find a solution for your particular problem in the next chapter, "Solutions to Common Problems."

If you suspect the problem may be with a program not published by Apple, contact the program's publisher.

Step 5: Use Apple System Profiler

Apple System Profiler is a utility that allows you to quickly view different types of information about your computer, helping you and the Apple Assistance Center troubleshoot your computer.

Opening Apple System Profiler

If you are able to start up your computer properly, choose Apple System Profiler from the Apple (🍎) menu to open the utility.

When you open Apple System Profiler, a System Overview window appears.

Getting information about different hardware and software

To get more specific information about different hardware and software used by your computer, or to go back to the System Overview window, choose one of the following commands from the Select menu:

- **System Overview**

  This command uses the window to display general information about your computer, including what type of processor it's using, how much memory is installed, and what version of Mac OS is installed.

- **Volume Information**

  This command uses the window to display information about disks and disk partitions that your computer can access.

- **Device Information**

  This command uses the window to display information about equipment, such as CD-ROM drives and scanners, connected to your computer.

- **Control Panel Information**

  This command uses the window to display a list of control panels installed on your computer. Using the buttons in the window, you can choose to view all control panels, only non-Apple control panels, or only Apple control panels. You can also tell whether a control panel is currently enabled.

- **Extension Information**

  This command uses the window to display a list of system software extensions installed on your computer. Using the buttons in the window, you can choose to view all extensions, only non-Apple extensions, or only Apple extensions. You can also tell whether an extension is currently enabled.

- **System Folder Information**

  This command uses the window to display a list of System Folders on your startup disk. Having more than one System Folder can cause various problems. Therefore, if you see more than one System Folder in the list, the extra one might be responsible for the problem you're having.

Getting help

To find out what the different items in the Apple System Profiler window mean, choose Show Balloons from the Guide (?) menu. Then point to the item you want to know about.

Consult this chapter for solutions to specific problems with your computer after trying the general troubleshooting tips in Chapter 4.

5 Solutions to Common Problems

This chapter contains descriptions of specific problems you might experience with your computer and solutions for them. If you haven't already tried the general troubleshooting tips in Chapter 4, do that first. Then return to this chapter.

WARNING If you have a problem with your computer and nothing presented in this manual solves it, consult the service and support information that came with your computer for instructions on how to contact an Apple-authorized service provider or Apple for assistance. If you attempt to repair the computer yourself, any damage you may cause will not be covered by the limited warranty. Contact an Apple-authorized dealer or service provider for additional information about this or any other warranty question.

Problems turning on or starting up your computer

The computer is turned on but the screen is dark.

One of the following is probably the cause:

- You have a screen saver program that darkens the screen when the computer has not been used for a certain period of time.

  Press a key or move the mouse to turn off the screen saver.

- Your computer has gone to sleep due to inactivity. "Wake it up" by pressing the Power key (marked with a ◁) on the keyboard.

- The monitor's brightness control (☼) is not adjusted properly.

  Check the monitor's brightness control and turn it up if necessary.

- The monitor's contrast control (◑) is not adjusted properly.

  Check the monitor's contrast control and adjust it if necessary.

- The monitor is not getting power.

  Check that the computer's power cord is firmly connected and plugged into a grounded electrical outlet, and that the outlet has power. If the computer is plugged into a power strip, make sure the power strip is turned on. Check that the monitor is plugged in and turned on, and that the monitor cable is firmly connected to both the computer and the monitor.

The computer makes an unusual sound at startup.

- If you hear four tones, try starting up the computer from the system software CD-ROM disc. For instructions, see "Starting Up From the System Software CD-ROM Disc" in Chapter 6, "Diagnostic Techniques." If the hard disk icon appears after starting up from the system software CD, you can probably repair it using the instructions in "Testing and Repairing Your Hard Disk" in Chapter 6. If the computer does not start up, or if the hard disk icon does not appear, the hard disk may need professional repair. Contact an Apple-authorized service provider or call Apple for assistance.

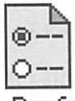
- There may be a problem with the information stored in the area called parameter RAM (PRAM) or nonvolatile video RAM (NVRAM). Reset the PRAM and NVRAM.

  When you reset the PRAM and NVRAM, the settings on most of your computer's control panels revert to their defaults (original, standard settings). You may want to check the settings in your control panels for memory, networking, and monitors, and any aspect of your work that seems affected after you reset the PRAM and NVRAM.

  Follow these steps to reset the PRAM and NVRAM:

  1. Shut down your computer by pressing the Power key (◁) and then clicking Shut Down.
  2. Make sure the Caps Lock key is not engaged.
  3. Position the fingers of your left hand on these keys: Command (⌘), Option, and R. Locate the P key, so you can find it quickly for step 4.
  4. Press the Power key (◁) to turn on your computer. Immediately after you hear the startup sound, press and hold down the Command (⌘), Option, and R keys at the same time you press and hold down the P key.
  5. When you hear the startup sound repeat twice, release the keys, then immediately press and hold down the Shift key to start up with your Extensions turned off. Release the Shift key when you see the message "Extensions off" in the Welcome to Macintosh box.

     If you don't see the "Extensions off" message, wait until startup is complete, then press and hold down the Shift key while you choose Restart from the Special menu. Continue to hold down the Shift key until the message appears.
  6. Open the System Folder, then open the Preferences folder.
  7. Drag the Display Preferences icon to the Trash.



Display Preferences

8. Restart your computer *without* holding down the Shift key.

   The computer starts up with your Extensions turned on again.

9. If you had selected special settings in any control panels, open those control panels to respecify the settings you want.

When you start up the computer, you see a message about the system software.

- The system software on the startup disk you're using may be incomplete or damaged or may be the wrong version. Make sure you're using the correct disk as a startup disk.
- If you're sure you're using the correct startup disk, you may need to reinstall system software. See "Installing System Software" in Chapter 6.

When you start up, a disk icon with a blinking question mark appears in the middle of the screen and stays there for longer than 15 seconds.

This icon indicates that your Macintosh cannot find the system software it needs to start up. One of the following is probably the cause:

- Your computer may be having a problem recognizing external SCSI (Small Computer System Interface) equipment, such as hard disks and scanners that you may have connected.

  Shut down your computer, turn off all external SCSI equipment, and disconnect the first SCSI device in the chain from your computer's SCSI port (marked with the ⌖ icon). Then restart the computer. If the computer starts up after you disconnect your SCSI equipment, refer to the manuals that came with the equipment. See also Chapter 7 ("Connecting Additional Equipment") of the User's Manual on the *Power Macintosh User's Manual* CD-ROM disc, for information on the proper way to connect SCSI equipment and assign SCSI ID numbers.

  If you have a printer connected to your computer's SCSI port, make sure your printer is connected properly. Most printers connect to the printer port, not the SCSI port. Check the manuals that came with your printer for information on how to connect it properly.

- System software is not installed on the startup hard disk, the system software is damaged, or the hard disk is not working properly.

  Follow the instructions in "Testing and Repairing Your Hard Disk," in Chapter 6, "Diagnostic Techniques," to test your startup hard disk and repair any damage. If repairing the disk doesn't help, reinstall system software on your startup hard disk. For detailed instructions, see "Installing System Software" also in Chapter 6.

A disk icon with an X appears in the middle of the screen and a floppy disk is ejected from the disk drive.

This icon indicates that the floppy disk you tried to start up from is not a startup disk. (When you turn on your computer, it looks first in the floppy disk drive for a disk containing system software. If the disk in the drive does not contain system software, the computer ejects the disk and looks on its internal hard disk for system software.)

Wait a few seconds. The computer should start up from its internal hard disk. Make sure you insert floppy disks only after the computer has begun starting up.

A "sad Macintosh" icon appears and the computer won't start up.

This icon indicates that your Macintosh cannot start up because of a problem with the system software or the computer hardware.

Eject any floppy disks by turning off the computer and then holding down the mouse button while you turn the computer on again. Try starting up with the system software CD-ROM disc. Do this by inserting the CD-ROM disc into the CD-ROM drive and holding down the C key while you restart the computer. (For detailed steps, see "Starting Up From the System Software CD-ROM Disc" in Chapter 6, "Diagnostic Techniques.") If the "sad Macintosh" icon appears again, consult the service and support information that came with your computer for information on contacting an Apple-authorized service provider or Apple for assistance.

The computer freezes after the "happy Macintosh" icon appears but before the "Welcome to Macintosh" message appears.

- Some equipment may not be correctly connected to your computer or an individual piece of external equipment may be causing the problem.

  Shut down the computer and disconnect external equipment. To determine which piece of equipment is causing the problem, reconnect them one by one and start up your Macintosh each time until the problem reoccurs.

- If the problem still occurs when no external equipment is connected to the computer, the hard disk may be damaged.

  Follow the instructions in "Testing and Repairing Your Hard Disk" in Chapter 6, "Diagnostic Techniques."

The computer freezes as icons are appearing at the bottom of your screen (system extensions are loading).

- Some equipment may not be correctly connected to your computer or an individual piece of external equipment may be causing the problem.

  Shut down the computer and disconnect external equipment. To determine which piece of equipment is causing the problem, reconnect them one by one and start up your Macintosh each time until the problem reoccurs.

- Two or more system extensions may be in conflict with each other.

  Restart the computer, holding down the Shift key until you see the message "Extensions off" in the Welcome to Macintosh box. If the computer starts up, turn to "Checking Your System Extensions" in Chapter 6, "Diagnostic Techniques."

- If the computer still freezes, your System Folder may be damaged.

  Follow the instructions in "Performing a Clean Installation of System Software" in the "Installing System Software" section in Chapter 6.

The hard disk icon does not appear on the desktop.

If you don't see a hard disk icon on the desktop, try the following:

- Use the Drive Setup program to make the disk available. Drive Setup is on the system software CD-ROM disc. For instructions on using Drive Setup, follow the instructions in "Testing For Damage On Your Hard Disk" in the section "Testing and Repairing Your Hard Disk" in Chapter 6, "Diagnostic Techniques."
- If the hard disk is internal, shut down your computer, wait at least 10 seconds, and then turn it on again.
- If the hard disk is external, make sure that it is turned on and that its cable is connected firmly; then restart the Macintosh.
- Check the ID numbers of all SCSI equipment (anything connected to the SCSI port [⇳]) connected to your computer. Each SCSI device must have its own unique ID number. See the manuals that came with your SCSI equipment. See also Chapter 7 ("Connecting Additional Equipment") of the User's Manual on the *Power Macintosh User's Manual* CD-ROM disc, for information on setting SCSI ID numbers.
- If the hard disk is your startup disk, follow the instructions in "Testing and Repairing Your Hard Disk," in Chapter 6, "Diagnostic Techniques," to test your startup hard disk and repair any damage. If repairing the disk doesn't help, reinstall system software on your startup hard disk. For detailed instructions, see "Installing System Software," which is also in Chapter 6.

Your computer starts up and you see large folder-shaped areas containing labeled pictorial buttons, instead of the usual Macintosh desktop.

- Your computer may have started up from a CD-ROM disc containing At Ease, an alternative to the Macintosh desktop. You need to have the Macintosh desktop on your screen before you can use any of the instructions in this manual.

  To return to the Macintosh desktop, choose Shut Down from the Special menu. After your computer has shut down, restart it and then immediately press the Open/Close button of your CD-ROM drive to open the tray. Remove the CD-ROM disc and gently close the tray. Your computer finishes starting up.

  Note: To avoid having the computer start up from a CD-ROM disc, remember to remove any disc in the drive before you shut down your computer.

Your computer won't restart, and there may or may not be a CD-ROM disc in the CD-ROM drive.

- Your computer may be trying to start up from a CD-ROM disc. Press the Open/Close button of your CD-ROM drive to open the tray, and remove the CD-ROM disc. Close the tray, then restart your computer.
- If the computer freezes, you can try to "force" the program you're using to quit by simultaneously pressing the keys Command (⌘), Option, and Esc on your keyboard. Then click Force Quit in the dialog box that appears. *(Note:* Unsaved changes in your current documents will be lost.) Immediately save all open documents, quit all other open programs, and restart the computer.
- If the problem reoccurs, reset the parameter RAM. (See the entry "The Computer Makes an Unusual Sound at Startup," earlier in this section.)

Every time the computer starts up, it rebuilds the desktop.

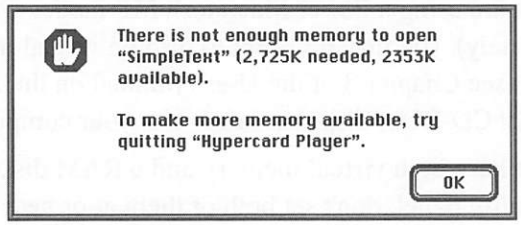
- There may be a folder on your hard disk that has the same name as a file the computer uses to keep track of information on your disks. Manually search for a folder named "Desktop" or "Desktop file." If you find one, rename it. Then restart the computer. (Do not use the Find File feature to search for the desktop file. Find File may find the desktop file but you may not be able to access it.)

When the computer starts up, no icons appear in the windows, and the pointer alternates between an arrow and a wristwatch, or an empty flashing box appears.

- There is a problem with the display of windows. Restart the computer, holding down the Option key until the desktop icons appear. (When the desktop appears, all windows will be closed.)

Problems with application programs, documents, and memory

You can't start an application program; you see a message that not enough memory is available.


There is not enough memory to open "SimpleText" (2,725K needed, 2353K available).
To make more memory available, try quitting "Hypercard Player".
OK

All the memory in your Macintosh is in use by other application programs, system software, and system resources.

- Quit other open programs to free up memory, then open the program you want to use.
- Follow these steps to allocate more memory to the program:

1. Choose About This Macintosh from the Apple (🍎) menu. Take note of the number in the Largest Unused Block section. This number tells you how much memory is available to open programs.
2. Quit the program if it's open, select its icon, and choose Get Info from the File menu. Take note of the numbers in the Minimum Size and Preferred Size boxes.
3. If the number in the Minimum Size box is larger than the largest unused block, not enough memory is available to use this program. To free memory, quit open programs or restart the computer. You can also type a smaller number in the Minimum Size box if you want to open the program using less memory. But some programs don't work well if you assign them less memory.
4. If the number in the Preferred Size box is smaller than the largest unused block, you may need to assign more memory to the program. (A program may need more memory if you are working with complex documents.) Type a larger number in the Preferred Size box.

- Use the Memory control panel to reduce the size of the disk cache, remove or reduce the size of your RAM disk, or turn on virtual memory. For more information, see Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu.

  Note: If you are using a Power Macintosh MP model (Power Macintosh 9600 series only), you may not want to turn on virtual memory. For more information, see Chapter 3 of the User's Manual on the *Power Macintosh User's Manual* CD-ROM disk that came with your computer.

  Note: If you have both virtual memory and a RAM disk turned on in the Memory control panel, don't set both of them at or near their maximum values. Doing so can result in unpredictable or reduced performance by your computer. (RAM disk uses random-access memory, or RAM, as if it were a hard disk.)

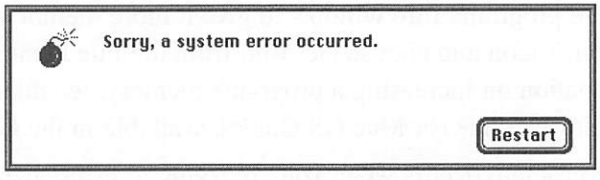
- Disable system extensions that you don't need. For more information, see the topic on system extensions in Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu.
- If you have installed system software additions from the Apple Extras folder such as Apple VideoPhone or PlainTalk, you may want to remove them if you are not using them. (This software can decrease the amount of memory available for use by application programs.) To remove a system software addition, locate and run the Installer for the software, and use its "Custom Remove" option to remove it.
- If you frequently want to open more programs than memory allows, you may want to install more random-access memory (RAM). See Chapter 8, ("Installing PCI Expansion Cards and Additional Memory"), of the User's Manual on the *Power Macintosh User's Manual* CD-ROM disk that came with your computer.

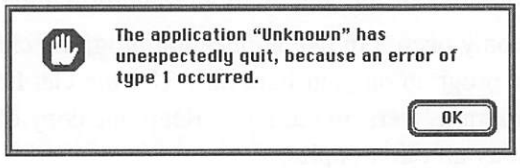
The computer "freezes."

- Your computer may be trying to complete a task, but it's taking so long that it seems that the screen has frozen. If you need to do something else instead, try simultaneously pressing the Command (⌘) key and the period key (.) to cancel the task the computer is working on.
- There may be a temporary software problem that can be fixed by restarting your computer. Follow the instructions in "Step 2: Restart Your Computer" in Chapter 4, "Start Here If Trouble Occurs."

If the problem reoccurs, it may involve one or more of your application programs. See the next entry for additional suggestions.

A dialog box with a bomb appears, or a dialog box indicates that a software application program has quit unexpectedly.





The application program needs more memory, or there is a software problem.

- Write down what you were doing when the message appeared, and write down the text of the message. This information may help a technical support representative diagnose your problem if you later need to contact Apple or the manufacturer of the application program.

  About the codes in error messages: The number codes in error messages are used in software development. Sometimes they can help a technician narrow down the source of a problem. However, the codes are usually too general or technical in nature to help you diagnose a problem yourself.

- Restart your Macintosh. (For detailed steps, see Chapter 4, "Start Here If Trouble Occurs.") Most software problems are temporary, and restarting the computer usually corrects the problem.
- Check for multiple System Folders on your startup disk, using the Find File command. Throw away extra System Folders. The System Folder that your computer is using has a small computer icon on it, which distinguishes it from any other System Folder.

System Folder

- Check for viruses on all your disks, using a virus-detection program. Eliminate any viruses the program finds.
- Use the program's Info window to give it more memory. (Select the program's icon and choose Get Info from the File menu.) For more information on increasing a program's memory, see the memory topic in Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu.
- If the problem occurs when you are trying to print, there may not be enough memory for printing. Quit other open programs to free up memory.
- If the bomb only occurs in one application program, check for multiple copies of the program on your hard disk. Use the Get Info command to check the programs' version numbers. Keep one copy of the latest version and throw away all other copies.

  Also, try reinstalling the program from the original disks. If reinstalling doesn't solve the problem, contact the manufacturer of the program to see if the program contains software errors or "bugs" and if it is compatible with the version of system software you're using.

- Sometimes incompatible system extensions or control panels can cause system software problems. Restart while holding down the Shift key; this temporarily turns off all system extensions.

  If your computer works normally after you do this, use the Extensions Manager control panel (in the Control Panels folder in the Apple [] menu) to turn on extensions and control panels one at a time. Restart after you turn on each extension and control panel. This procedure should identify incompatible extensions and control panels. (If you just added new software to your computer, its system extension is the most probable cause of the problem.) For detailed instructions, see the information about managing system extensions in Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu.

  If your computer performs better when a particular extension or control panel is turned off, contact the software's manufacturer for information or an upgrade.

A program won't open.

- The application program may already be open. Check the Applications menu to see which programs are running.
- There may not be enough memory available to open the program. Quit any programs you're not using and try again. If that doesn't work, try restarting the computer.
- If the program is on a floppy disk, make sure the disk is unlocked. (You unlock a disk by sliding the tab at the corner of the disk so that it covers the hole.)
- The program may be damaged, or it may not be compatible with PowerPC technology. Check to make sure the software is PowerPC-compatible, and install it from a known good source (such as the original program disks).
- Check that the program is compatible with the version of system software that you are using. (See the program's documentation, or contact the manufacturer or vendor.)

You can't open a document, or you see a message that an application program can't be found.

The document may have been created with a program that is not on your hard disk, or with a different version of the program.

- Try starting a program that you think might be able to open the document. Then choose Open from the program's File menu to open the document. For more information, see the documentation that came with the program.
- Purchase and install the correct software to use the document, or find out if the creator of the document can convert it to a form that one of your programs can use.
- Rebuild your desktop. For instructions, see "Rebuilding Your Desktop" in Chapter 6, "Diagnostic Techniques."
- Don't try to open the files in your System Folder. Most of the files in your System Folder are used by your computer for internal purposes and are not intended to be opened.
- If the document is from a DOS or Windows computer, read the next section.

You experience problems using a document from a DOS or Windows computer.

If you can't open a DOS or Windows document by double-clicking its icon, try one of the following:

- Open the document from within the program by choosing Open in the program's File menu.
- Use the PC Exchange control panel (in the Control Panels folder in the Apple [] menu) to specify which Macintosh program will open the document.

If a DOS document is displayed incorrectly, or you see strange codes or characters in the document, try one of the following:

- Your application program may have special procedures for opening and saving documents with different file formats. See the information that came with your program, or call the program's publisher.
- Try opening the document in another program.

Note: Some characters that can be displayed on the Macintosh are not accurately displayed on DOS computers.

For information about working with DOS or Windows documents on your Macintosh, see Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu.

A file can't be thrown away.

- The file may be locked. Select the file's icon, choose Get Info from the File menu, and click the Locked checkbox to remove the X. You can delete locked files that are in the Trash by holding down the Option key while you choose Empty Trash from the Special menu.
- An application program may be using the file. Close the file or quit the program.
- If the file is on a floppy disk, the disk may be locked. Unlock the disk by sliding the tab so that it covers the hole at the corner of the disk.
- The file may be in a shared folder that can't be changed. You can throw away the file by turning off file sharing temporarily (click Stop in the Sharing Setup control panel). Or you can select the shared folder, choose Sharing from the File menu, and uncheck the box labeled either "Can't be moved, renamed, or deleted" or "Same as enclosing folder."

You see a message that your application program can't be opened because a file can't be found.

Macintosh programs designed specifically for the PowerPC microprocessor (also called "native" applications) use special files called "shared libraries." Any necessary shared libraries should be installed automatically when you install these special Macintosh programs.

Follow the directions that came with your program to reinstall it. If the shared library is still missing, contact the software program's manufacturer for assistance.

You experience problems using an older Macintosh program.

Some older Macintosh programs are not completely compatible with Macintosh computers that have the PowerPC microprocessor.

- Open the Memory control panel (in the Control Panels folder in the Apple [] menu) and turn off Modern Memory Manager.
- If that doesn't work, contact the program's publisher to see if an upgrade is available.

A window has disappeared.

- Another open window may be covering the one you're looking for. Move, resize, close, or hide windows until you see the one you want.
- The program the window is associated with may be hidden. Choose Show All from the Application menu and then click the window you want, or choose the program from the Application menu.

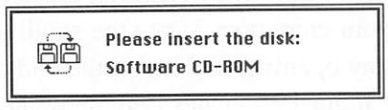
Problems with CD-ROM drives and discs

Problems using the CD-ROM drive

The CD-ROM drive icon does not appear on the screen.

- If you reinstalled the CD-ROM software, make sure to restart your computer afterward.
- Make sure that the Apple CD-ROM extension is turned on in the Extensions Manager control panel. (Open the Extensions Manager control panel in the Control Panels folder in the Apple [] menu). Then restart your computer.

The computer keeps asking you to reinsert a CD-ROM disc after you've ejected it.



- An application program or document from the CD-ROM disc is still open and is "looking for" the disc. Reinsert the CD-ROM disc and close the documents or quit the application programs that are open on the disc. (Go to the Application menu in the upper-right corner of your screen and make sure that the Finder is the only application listed. If not, select one of the other applications programs and then choose Quit from the File menu. Do this for any other applications listed in the Application menu.) Then eject the CD-ROM disc by selecting its icon and choosing Put Away from the File menu or by dragging the CD-ROM disc's icon to the Trash.
- You may not have properly ejected the CD-ROM disc. To eject the disc properly, reinsert it, select the CD-ROM disc icon, and choose Put Away from the File menu. (You can also drag the CD-ROM disc's icon to the trash.) If you eject a CD-ROM disc by choosing Eject Disk from the Special menu, the computer remembers the CD-ROM disc in its memory and keeps asking you to reinsert it.

The tray of your CD-ROM drive won't open.

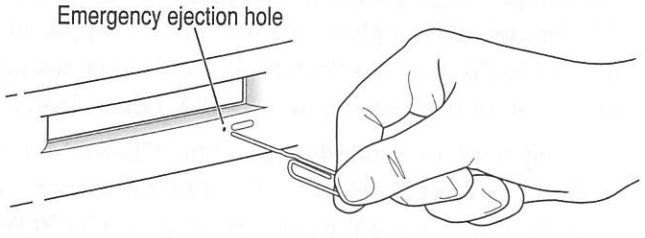
If a CD-ROM disc icon appears on your screen:

- Drag the disc icon to the Trash, or select it and choose Put Away from the File menu. (*Note:* You won't lose information on the CD-ROM disc by dragging its icon to the Trash. *Don't* select the disc icon and then choose Eject Disk from the Special menu.)

  If the AppleCD Audio Player is active, choose Eject CD from the File menu or click the eject button in the AppleCD Audio Player controller.

If no CD-ROM disc icon appears on your screen:

- Restart your computer. Immediately after you hear the startup chime, press the Open/Close button of your CD-ROM drive.
- The signal to open the tray may not be reaching the computer. To manually open the tray, turn off your computer, locate the small pinhole to the lower right of the CD-ROM tray opening, and insert the end of a large straightened paper clip about 1.25 inches into the pinhole. Push gently but firmly until the tray is released, then carefully pull the tray open. (Do not force the tray open; wait until the paper clip has dislodged it to be sure you don't break the front of the tray.) Remove the CD, turn on your computer, and press the Open/Close button of your CD-ROM drive to see if it is working properly.



WARNING Turn off your computer before you attempt to eject the tray using a paper clip. If you don't, you may damage the CD-ROM drive.

If neither of these suggestions works, your CD-ROM drive may be damaged. Contact an Apple-authorized service provider or Apple for further assistance.

Your computer won't restart, and there may be a CD-ROM disc in the CD-ROM drive.

- Your computer may be trying to start up from a CD-ROM disc. Press the Open/Close button of your CD-ROM drive to open the tray, and remove the CD-ROM disc. Close the tray, then restart your computer.

Your CD-ROM disc is vibrating in the CD-ROM drive.

- Some CD-ROM disc labels have artwork that is noticeably thicker on one side than the other and can cause the disc's weight to be slightly off-center. This uneven distribution of weight coupled with the high rotation speed of your CD-ROM drive can cause some discs to wobble in the drive and make your computer vibrate. The vibration damages neither the CD-ROM disc nor the computer and affects very few CD-ROM discs. If you can feel or hear that the CD-ROM disc is vibrating in the computer, you don't need to do anything special; continue to use the CD-ROM disc as you normally would.

  Note: If you use a CD-ROM disc with a removable (sticky) label, remove the label before inserting the disc.

Your computer starts up and you see large folder-shaped areas, containing labeled pictorial buttons, instead of the usual Macintosh desktop.

- Your computer may have started up from a CD-ROM disc containing At Ease, an alternative to the Macintosh desktop.

  To return to the Macintosh desktop, choose Shut Down from the Special menu. After your computer has shut down, restart it and then immediately press the Open/Close button of your CD-ROM drive to open the tray. Remove the CD-ROM disc and gently close the tray. Your computer finishes starting up.

  Note: To avoid having the computer start up from a CD-ROM disc, remember to remove any disc from the drive before you shut down your computer.

Problems using CD-ROM discs

You insert a CD-ROM disc, but its icon doesn't appear on the Macintosh desktop.

- Make sure that the disc label is facing up and the disc is centered in the tray.

  IMPORTANT If you're using a small (8 cm) disc, make sure it's centered within the tray's inner ring and the computer is absolutely level. An improperly seated small disc in your computer may result in damage to the disc, the CD-ROM drive, or both.

- Make sure the tray is closed all the way.
- Try restarting your computer.
- Make sure that the Apple CD-ROM extension is turned on in the Extensions Manager control panel. (Open the Extensions Manager control panel in the Control Panels folder in the Apple [] menu). Then restart your computer.
- Try starting your computer from the system software CD-ROM disc that came with your computer; insert the CD and restart while holding down the C key. (For detailed steps, see "Starting Up From the System Software CD-ROM Disc" in Chapter 6, "Diagnostic Techniques.") If only the hard disk icon appears on the desktop, then there may be a hardware problem with your CD-ROM drive. If the CD-ROM disc icon appears above the hard disk icon, reinstall your CD-ROM software. The easiest way to do this is by reinstalling your system software, following the instructions in Chapter 6, "Diagnostic Techniques."

Your computer displays the message "This is not a Macintosh disk: Do you want to initialize it?" when you insert a CD-ROM disc in the CD-ROM drive.

- Make sure that the Foreign File Access extension is installed and turned on. Use the Extensions Manager control panel in the Control Panels folder in the Apple () menu to turn it on, then restart your computer.
- The disc may use a format that the Macintosh cannot recognize. Ask the disc's manufacturer for a disc that a Macintosh can recognize.

Your computer ejects a CD-ROM disc without giving you any error message.

- Make sure the disc is lying flat in the tray and the disc label is facing up.

  IMPORTANT If you're using a small (8 cm) disc, make sure it's centered within the tray's inner ring and the computer is absolutely level. An improperly seated small disc in your computer may result in damage to the disc, the CD-ROM drive, or both.

- The disc may need to be cleaned. (See "Handling CD-ROM Discs" in the section "Handling Your Computer Equipment" in Appendix A.) If there are visible scratches on the shiny side of the disc, you may be able to remove them with a CD-ROM disc polishing kit (available from your audio CD dealer). If the scratches can't be removed, you need to replace the disc.
- The disc may be damaged. Try another disc in the drive, and try the original disc in another drive. If the original drive reads other discs or if the original disc also doesn't work in another drive, the disc is probably damaged. You need to replace it.

You can't open a document on a CD-ROM disc.

- Try starting a program that you think might be able to open the document. Then choose Open from the program's File menu to open the document.
- Read the manual that came with your CD-ROM disc. Some discs come with software that you need to install before using the disc.

You can't save changes you make to information on a CD-ROM disc.

- A CD-ROM disc is a read-only medium. This means that information can be read (retrieved) from it, but not written (stored) on it. You can save the changed information on a hard disk or floppy disk.

Your CD-ROM disc is vibrating in the CD-ROM drive.

- Some CD-ROM disc labels have artwork that is noticeably thicker on one side than the other and can cause the disc's weight to be slightly off-center. This uneven distribution of weight coupled with the high rotation speed of your CD-ROM drive can cause some discs to wobble in the drive and make your computer vibrate. The vibration damages neither the CD-ROM disc nor the computer and affects very few CD-ROM discs. If you can feel or hear that the CD-ROM disc is vibrating in the computer, you don't need to do anything special; continue to use the CD-ROM disc as you normally would.

  Note: If you use a CD-ROM disc with a removable (sticky) label, remove the label before inserting the disc.

Problems using ISO 9660 or High Sierra discs

You cannot access files on a CD-ROM disc that uses the ISO 9660 or High Sierra format.

- Discs in the ISO 9660 and High Sierra disc formats have version numbers attached to file names. Some application programs need these version numbers in order to work with files. To make the version numbers available to programs on your computer, follow these instructions.

  Drag the CD-ROM disc icon to the Trash. When the tray opens, hold down the Option key and push the tray back in. Continue to hold down the Option key until the disc is mounted in the drive. The program you are using should now be able to locate file names on that CD-ROM disc.

- Make sure that Foreign File Access, ISO 9660 File Access, and High Sierra File Access files are present in the Extensions folder in the System Folder on your hard disk. If these files are not present, reinstall your CD-ROM software. The easiest way to do this is by reinstalling your system software, following the instructions in Chapter 6, "Diagnostic Techniques."

Problems playing audio CDs

You don't hear any sound when you play an audio CD or an audio track on a CD-ROM disc using the AppleCD Audio Player.

- If you have headphones or speakers connected to the computer, make sure they are firmly connected. Make sure the volume control on your headphones or speakers is not turned down too low.
- If you do not have headphones or speakers connected to the computer, make sure that nothing else is plugged into the computer's sound output port (🔊).
- If you are using a CD-ROM disc over a network, you won't be able to hear the audio portion.
- Make sure the volume is turned up in the AppleCD Audio Player. With the program open, drag the volume control slider up, use the volume controls on your computer, or press the Up Arrow key on your keyboard.
- The CD may have been paused. Click the Play/Pause button in the AppleCD Audio Player once or twice.

While playing an audio track on a CD-ROM disc that combines audio tracks and data, you double-click the disc icon and the audio track stops playing.

- You can't open data files on a CD-ROM disc and listen to audio tracks on it at the same time.

You are unable to record sound from an audio CD.

- You may need to reset the sound options in the Monitors & Sound control panel. Refer to the information on sound in Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu.

Problems using Photo CDs

You insert a Photo CD disc, but its icon doesn't appear on the desktop.

- Reinstall the CD-ROM and QuickTime software. The easiest way to do this is by reinstalling your system software, following the instructions in Chapter 6, "Diagnostic Techniques."

Your computer does not display color icons for individual images on a Photo CD.

- Your computer may be low on memory. To view color icons, restart your computer and then reopen the Photos folder. See Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu, for more information on managing memory.

After you open an image file on a Photo CD, the image is scrambled, colors are displayed incorrectly, or no image appears in the window.

- The program you are using may not be designed to work with large (high-resolution) image files. You can open the image with another program or you can assign more memory to the program. See Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu, for more information on managing memory.

After you open an image on a Photo CD, your system "freezes" and does not respond to any input, or you have a "bomb" message on your screen.

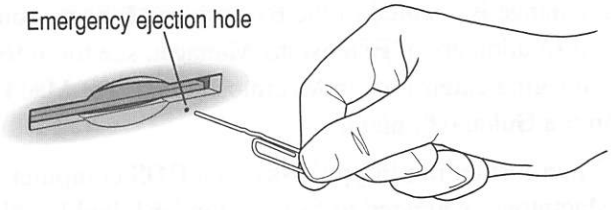
- Restart your Macintosh. (If you need help restarting your computer, see Chapter 4, "Start Here If Trouble Occurs." The program you are using may not be designed to work with large (high-resolution) image files. You can open the image with another program or you can assign more memory to the current program. See Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu, for more information on managing memory.

Problems with floppy disks and floppy disk drives

You can't eject a floppy disk.

If you can't eject a floppy disk in the usual way, by selecting the disk's icon and choosing Put Away from the File menu or by dragging the disk's icon to the Trash, try the following in order:

- Hold down the ⌘ and Shift keys and press the number 1 key on your keyboard.
- Shut down the computer. If the disk isn't ejected, then hold down the button on your mouse or other pointing device while you start up the computer again.
- Locate the small hole near the disk drive's opening, and carefully insert the end of a large straightened paper clip into it. Push gently until the disk is ejected. Do not use excessive force.



If none of these solutions works, take the computer or disk drive to your Apple-authorized service provider to have the disk removed.

You can't save or copy files onto a floppy disk.

- The disk may be locked. Unlock it by sliding the tab at the corner of the disk so that it covers the hole.
- The disk may be full. Throw away items on the disk that you no longer need, or save the files on a different disk.
- The disk may be damaged. Test it with Disk First Aid, which is located on the system software CD-ROM disc.
- The disk drive may be damaged. To see if this is the problem, try saving or copying files onto another floppy disk. If you are still unsuccessful, the drive may need professional repair. Contact your Apple-authorized service provider or call Apple for assistance.

After inserting a floppy disk, you see the message, "This is not a Macintosh disk: Do you want to initialize it?" or "This disk is damaged: Do you want to initialize it?"

- The floppy disk may be new and not yet initialized. If you're sure the disk has never been used, click Yes.

> **WARNING** Clicking Yes erases all data that may be on the disk. Therefore, only click Yes if you're sure the disk contains no important data. If you're not sure, click No.

- The disk may have been formatted for use on DOS/Windows systems, or some other kind of computer. If so, see the tips that follow.
  - Click No in the dialog box asking you if you want to initialize the disk.
  - Make sure the PC Exchange control panel is in the Control Panels folder (in the Apple [] menu) and that it is turned on. Also, make sure PC Exchange is enabled in the Extensions Manager control panel. For more information about Extensions Manager, see the information about managing extensions in Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu.
  - When formatting floppy disks on a DOS computer for use in a Macintosh, you need to format standard double-sided disks as 720K disks and high-density disks as 1440K disks. Double-sided disks formatted in 1440K format and high-density disks formatted in 720K format may not work in a Macintosh.

    If you think your DOS floppy disk might have a format that doesn't work in a Macintosh, use a DOS computer to copy the contents of the disk onto a properly formatted disk.
- The floppy disk may be too warm or too cold to be read. You can warm up a cold disk safely by setting it on top of your monitor for a few minutes. You can cool an overly warm disk by placing it in a shady, cool place.

- The disk drive may be damaged. To see if this is the problem, click No to eject the disk; then insert the disk into another drive, if you have one. If you still see the message, the floppy disk may be damaged. If the disk icon appears on the desktop, one of the drives may be damaged. (When a disk that was written on by one drive cannot be read by another, the heads on one of the drives are out of alignment. The drive that is misaligned or broken may not be the drive that cannot read the disk; try the disk in three or four drives to identify the drive with the problem.)
- If none of these suggestions works, the floppy disk is probably damaged. First use a disk recovery program to copy the data from your damaged disk onto a good disk. For instructions, see the documentation that came with the disk recovery program. Then, use Disk First Aid (located on the system software CD-ROM disc) to repair the damaged floppy disk.

The computer keeps asking you to reinsert a floppy disk after you've ejected it.

- An application program or document from the floppy disk is still open and is "looking for" the disk. Reinsert the disk and close the documents or quit the application programs that are open on the disk. (Go to the Application menu in the upper-right corner of your screen and make sure that the Finder is the only application listed. If not, select one of the other application programs and then choose Quit from the File menu. Do this for any other applications listed in the Application menu.) Then eject the floppy disk by selecting its icon and choosing Put Away from the File menu.
- You may not have properly ejected the floppy disk. To eject the disk properly, reinsert it, select the floppy disk icon, and choose Put Away from the File menu. If you eject a floppy disk by choosing Eject Disk from the Special menu, the computer remembers the floppy disk in its memory and keeps asking you to reinsert it.

Problems with hard disks

The computer won't start up from the internal hard disk, or the hard disk icon doesn't appear on the desktop.

- There may be a temporary software problem. Turn off the computer, wait at least 10 seconds, and then turn it on again.
- There may be a problem with your startup disk or with its system software. See "Testing and Repairing Your Hard Disk" in Chapter 6, "Diagnostic Techniques."

The computer is using the wrong disk as a startup disk.

- Open the Startup Disk control panel and make sure the correct disk is selected. Then restart the computer.
- If you're trying to start up from an external hard disk, your computer may be having a problem recognizing the disk, which is a SCSI device. Refer to the manual that came with the hard disk. See also Chapter 7 ("Connecting Additional Equipment") of the User's Manual on the *Power Macintosh User's Manual* CD-ROM disc, for information on the proper way to connect SCSI equipment and assign SCSI ID numbers.
- Reset the PRAM and NVRAM by following the instructions in "The Computer Makes an Unusual Sound at Startup" earlier in this chapter.

Problems with your computer's speed

Your computer's performance decreases

- If you notice a decrease in your computer's speed and general performance after you install a control panel or system extension, it may be because the software is not compatible with either Macintosh computers built with the PowerPC microprocessor or with other system extensions.

  To find out if a system extension or control panel is the problem, follow the instructions in the section "Checking Your System Extensions" in Chapter 6, "Diagnostic Techniques."

- Use the Memory control panel to turn off virtual memory. For more information on virtual memory, see the information about memory in Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu.

  Note: If you turn on both virtual memory and RAM disk in the Memory control panel, don't set both of them at or near their maximum values. Doing so can result in unpredictable or reduced performance by your computer. (RAM disk uses random-access memory, or RAM, as if it were a hard disk.)
- If you still do not notice an improvement, you may want to reinstall system software on your startup hard disk. See Chapter 6, "Diagnostic Techniques," for instructions.
- If you typically use several application programs at the same time, your computer's performance will increase if you install more random-access memory (RAM). See Chapter 8 ("Installing PCI Expansion Cards and Additional Memory") of the User's Manual file on the *Power Macintosh User's Manual* CD-ROM disc that came with your computer.

Your computer isn't performing as fast as you'd like.

If, after trying the tips in the previous section, your computer still isn't performing as fast as you'd like, try these suggestions. Each one will make only a small difference in your computer's speed; but if you try them all, you'll notice the improvement.

- Open the Memory control panel in the Control Panels folder in the Apple (🍎) menu; then make these changes:
  - In the Disk Cache section, increase the Cache Size slightly. (Because the amount of memory available for opening programs decreases as you increase the size of the cache, do not set the Cache Size too high.)
  - In the Modern Memory Manager section, click On.
  - In the Virtual Memory section, click Off if you haven't already done so.
- Open the Keyboard control panel in the Control Panels folder; then make these changes:
  - Set the Key Repeat Rate to Fast.
  - Set the Delay Until Repeat to Short.
- Turn off Menu Blinking. Open the General Controls control panel in the Control Panels folder; then click Off in the Menu Blinking section.

- If you don't need to see thousands or millions of colors on the screen, reduce the color depth. Open the Monitors & Sound control panel in the Control Panels folder; then click 256 in the Color Depth section.
- Increase the speed of mouse tracking. Open the Mouse control panel in the Control Panels folder; then set Mouse Tracking to Fast.
- Make sure your computer is not calculating folder sizes. Open the Views control panel in the Control Panels folder; in the List Views section, make sure the checkbox next to Calculate folder sizes is *not* checked.
- If your computer is not connected to an AppleTalk network, turn off AppleTalk. Open the Chooser in the Apple (🍎) menu; in the AppleTalk section, click Inactive.

Other problems with your computer

The pointer (↖) doesn't move when you move the mouse.

One of the following situations is probably the cause.

- The mouse or keyboard is not connected properly.

  Turn off the computer by pressing the Power key (◁) and then press return to choose Shut Down. If that doesn't work, press the power button on the front of the computer. With the computer off, check that the mouse and keyboard cables are connected properly. Then restart the computer.

  IMPORTANT Do not connect or disconnect the mouse while the computer is turned on. You may damage your computer.

- Signals from the mouse are not reaching the computer, either because the mouse needs cleaning or because there is something wrong with it.

  Clean the mouse according to the instructions in Appendix A, "Health, Safety, and Maintenance Tips."

  If you have another mouse or pointing device, try connecting and using it. (Turn the computer off before connecting it.) If the new device works, there is probably something wrong with the mouse you replaced. Consult the service and support information that came with your computer for instructions on how to contact an Apple-authorized service provider or Apple for assistance.

- There is a software problem. Try the following:

  Press ⌘-Option-Esc to quit the application program in use when the problem occurred. If this works, you can save the documents open in other programs before restarting.

  Restart your Macintosh. For instructions, see Chapter 4, "Start Here If Trouble Occurs."

- Follow the suggestions in the entry, "A Dialog Box With a Bomb Appears" earlier in this chapter.

Typing on the keyboard produces nothing on the screen.

One of the following is probably the cause:

- You haven't selected any text or set the insertion point (I).

  Make sure the program you want to type in is the active program. Then place the pointer (↖) in the active window and click to set an insertion point (I) or drag to select text (if you want to replace the text with your typing).

- If the computer beeps every time you press a key, Easy Access is probably turned on.

  Use the Extensions Manager control panel in the Control Panels folder in the Apple (🍎) menu to turn off Easy Access. For more information about Extensions Manager, see the information about managing extensions in Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu.

- The keyboard is not connected properly.

  Turn off the computer by pressing the power button on the front of the computer. With the computer off, check that the keyboard cable is connected properly at both ends.

- Some system software features that affect the way the keyboard works are turned on.

  Open Easy Access from the control panels listed under the Apple (🍎) menu and turn off Sticky Keys, Slow Keys, and Mouse Keys.

- There is a software problem.

  Restart your Macintosh. For instructions, see Chapter 4, "Start Here If Trouble Occurs."

  Check the startup disk and application program you were using when the problem occurred. To check that the programs and the system extensions you're using are compatible with the system software, restart while holding down the Shift key; this temporarily turns off all system extensions. If your computer works normally after you do this, use the Extensions Manager control panel to turn on extensions and control panels one at a time. Restart after you turn on each extension. This procedure should identify any incompatible extensions and control panels that may be causing the problem. (If you just added new software to your computer, its system extension is the most probable cause of the problem.) For detailed instructions, see the information about managing system extensions in Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu.

  If the problem reoccurs, you may need to reinstall system software. See Chapter 6, "Diagnostic Techniques," for instructions.

- The keyboard is damaged.

  If you have access to another keyboard, try using it instead. (Turn the computer off before connecting it.) If the new keyboard works, there is probably something wrong with the one you replaced.

If none of these procedures solves the problem, consult the service and support information that came with your computer for instructions on how to contact an Apple-authorized service provider or Apple for assistance.

Your screen displays a right-angle bracket prompt (>).

Your computer has tried to launch a "debugging" application, but could not find one on your hard disk. Debugging applications are programs that software developers use to locate and fix problems in computer code. If you do not have a debugging application installed, your screen displays a right-angle bracket prompt (>). To return to the desktop, type G and then press Return.

You can't record sound using an external microphone or the microphone built into your monitor.

- Make sure your sound input source is set to "External Microphone." Open the Monitors & Sound control panel in the Apple (🍎) menu, click the Sound icon, and choose "External Microphone" from the Sound Input pop-up menu.
- If you're using your monitor's built-in microphone to record, use the Monitors & Sound control panel to mute the monitor's speakers. In the same control panel, make sure that the sound input is set to the monitor's built-in microphone.

For additional help, see the information about sound in Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu.

The computer's clock keeps time inaccurately.

If your clock begins to keep time inaccurately, have an Apple-authorized service provider replace the battery. Consult the service and support information that came with your computer for instructions on how to contact an Apple-authorized service provider or Apple for assistance.

WARNING Do not attempt to replace the clock battery yourself. If the clock begins to lose accuracy, have an Apple-authorized service provider replace the battery. The service provider will dispose of the battery according to the local environmental guidelines.

Some icons look different from usual.

- There may be a problem with the information that the computer uses to keep track of files. To fix this problem, you need to rebuild the desktop. For instructions, see "Rebuilding Your Desktop" in Chapter 6, "Diagnostic Techniques."
- You may be using a file-compression program to save space on your hard disk. Some compression programs change the appearance of icons.

When trying to open or move a font file, you see an error message.

- The font file may be damaged. To remove damaged font files, follow these steps:

  1. Drag the Fonts folder out of the System Folder.
  2. Restart the computer.
  3. Open the Fonts folder that you dragged out and drag all the fonts that do not cause errors to the System Folder icon. Click OK in the dialog box.
  4. Throw away the old Fonts folder.
  5. Reinstall the damaged font from the original disk.

An icon is blinking in the menu bar.

- A program needs attention. Open the menu and choose the program whose icon is blinking (it may have a diamond by its name). Respond to any messages on the screen. If it's not clear what you should do, consult the documentation that came with the program.

The computer makes unusual sounds.

- A program may need your attention. If an icon is blinking in the menu bar, open the menu, choose the program whose icon is blinking (it may have a diamond by its name), and take the necessary action.
- Open the Easy Access control panel (if it is installed on your computer) and check whether any of its features are turned on.
- Select a different system sound in the Monitors & Sound control panel.
- If the sounds are regular or melodic, they may be caused by interference from electrical equipment. Move the computer farther away from any such equipment.

See also "The Computer Makes an Unusual Sound at Startup" in the section "Problems Turning On or Starting Up Your Computer" earlier in this chapter.

Problems with your printer

The following suggestions should work for all printers. (*Note:* Also refer to the manual that came with the printer.)

- Make sure that the printer driver for your printer is turned on in the Extensions Manager control panel in the Control Panels folder in the Apple (🍎) menu. To find out the name of the printer driver—for example, *LaserWriter*—refer to the documentation that came with your printer.
- Check your printer settings in the Chooser (in the Apple [🍎] menu), making sure you have selected the correct printer. If you are using a printer that is shared by other computer users (a printer on a local network), make sure that AppleTalk (in the lower-right corner of the Chooser) is active. If you are using your own printer (a serial printer connected to your computer), make sure that AppleTalk is inactive.
- Turn off the computer and printer and check the printer cable connections.
- If none of these suggestions solves the problem, you may need to reinstall the printer driver that came with your printer. Refer to the manual that came with your printer. (See the following important note.)

Note: If you have an Apple printer, you need to determine which printer driver to reinstall—the one that came with your printer or one of the drivers included on your system software CD-ROM disc. Depending on when you bought your printer, one of these printer drivers will be more recent than the other. It is the more recent one you want.

Nothing happens, or an error message appears when you try to print.

- There may not be enough memory for printing. Try the following:
  - Quit the program immediately after sending the Print command to free up memory for printing.
  - Increase the amount of memory for the desktop printer icon; select it, choose Get Info from the File menu, and type a larger number in the Preferred Size box.
  - Reduce the amount of memory the program uses.
- Make sure the printer is turned on. Some printers need to warm up for a few minutes after you turn them on.
- The printer may be out of paper or may need attention. Check the printer status lights and any messages on your screen.
- Open the desktop printer icon and check for status messages.
- Reinstall your printer software.

Problems with networks and file sharing

If you are having problems using the network or file sharing, try the following before attempting further solutions:

- Make sure the network is working by opening the Chooser and checking for the shared disks and printers you usually use.
- Make sure that AppleTalk is turned on in the Chooser.
- Open the AppleTalk and TCP/IP control panels and make sure the settings are correct. For more information, see Chapter 5 ("Connecting Your Computer to a Network") of the User's Manual on the *Power Macintosh User's Manual* CD-ROM disc that came with your computer.

- Make sure that all the network software is installed. The Network and AppleShare extensions should be in the Extensions folder. If you want to use file sharing, the Sharing Setup control panel should be in the Control Panels folder, and the File Sharing extension should be in the Extensions folder. If any of these items is missing, reinstall the system software according to the instructions in Chapter 6, "Diagnostic Techniques."

The computer you want to connect to doesn't appear in the Chooser.

- Make sure the computer you're trying to connect to is turned on.
- Make sure file sharing is active on the computer you're trying to connect to. (That computer's Sharing Setup control panel should say that file sharing is on.)

You connected to another computer, but the shared disk you want to use is not available.

- You may already be connected to the shared disk. Check for its icon on your desktop.
- You may not have the access privileges you need to use the shared disk. Ask the network administrator or the owner of the shared item to give you access. See the topic on file sharing in Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu.

You connected to another computer, but you can't see any files.

- Make sure that files are being shared on the other computer. The File Sharing Monitor control panel on that computer lists the items being shared.
- Make sure you have the access privileges you need to view the files. Ask the network administrator or the owner of the shared item to give you access. See the topic on file sharing in Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu.

A message says that file sharing can't be turned on.

- Make sure AppleTalk is turned on in the Chooser.
- Make sure you have at least 400K of available space on your hard disk.

- Some disk-formatting programs don't work with file sharing. If you use such a program, contact the manufacturer or vendor for compatibility information.
- There may be a problem with some of the information your computer uses to start up file sharing. Follow these steps in order until the problem is solved:

1. Open the Sharing Setup control panel and enter new information in the Owner section. Then try again to turn on file sharing.
2. Remove the File Sharing folder from the Preferences folder (inside the System Folder). Then restart the computer and try to turn on file sharing.
3. Reset the PRAM and NVRAM by following the instructions in "The Computer Makes an Unusual Sound at Startup" earlier in this chapter. Afterward, make sure to select the correct network type in the AppleTalk control panel.
4. Remove the Users & Groups data file from the Preferences folder (inside the System Folder). Restart the computer.
5. Reinstall system software.

A message says that an item can't be shared.

- Make sure you have at least 1 MB of space available on your hard disk.
- Some removable storage devices can't be shared. Check with the manufacturer or vendor of the device for more information.
- Some disk-formatting programs don't work with file sharing. If you use such a program, check with the program's manufacturer or vendor.

The file-sharing section doesn't appear in the Sharing Setup control panel.

- You may have turned off AppleTalk or file sharing using the Extensions Manager control panel. Turn them back on.
- If the file-sharing and network software are not in your System Folder, reinstall them by reinstalling system software. For more information, see Chapter 6, "Diagnostic Techniques."

You can't open a shared disk or folder.

- You may not have the access privileges needed to use the disk or folder. Ask the network administrator or the owner of the shared item to give you access.
- Check with the owner of the item to make sure you are entering your name exactly as the owner specified (including spaces and capitalization) and try again.

Consult this chapter to learn how to check system extensions, test and repair hard disks, install and remove system software, and use other diagnostic techniques.

6 Diagnostic Techniques

This chapter provides detailed instructions on several techniques you will use to diagnose and fix problems involving system software and hard disks. You will learn how to check your system extensions, start up from your system software CD-ROM disc, and test and repair disks. You will also see different ways to install and remove system software.

Checking your system extensions

System extensions are files that add features to your system software. Some extensions are incompatible with one another, with certain programs, or with Macintosh computers built with the PowerPC microprocessor. To check whether an extension is causing problems, follow these steps:

1 **Start up your computer while holding down the Shift key. Keep it held down until you see the message "Extensions off" in the Welcome to Macintosh box.**

This procedure turns off all extensions.

If your computer starts up and runs normally, continue with this section. If it doesn't, turn to the next section, "Testing and Repairing Your Hard Disk."

2 **Turn off troublesome extensions using the Extensions Manager control panel.**

For more information about Extensions Manager, see Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu.

Tips for locating problem extensions:

- If you recently installed a new item in the System Folder, it may be causing the problem. If you recently installed a new application program, a new extension may have been installed along with it. Check for new items in the Extensions folder and Control Panels folder. Also check for items of the kind "extension" or "control panel" in the System Folder itself.
- If two of your extensions provide similar features (such as two screen savers or two clocks), they may be incompatible with each other. Remove one of the extensions.
- If the computer is freezing or displaying an error message before it finishes starting up, restart the computer and take note of the icons that appear at the bottom of the screen. Many extensions display an icon as they start up, and extensions start up alphabetically. The last extension that displays an icon, or the one after it alphabetically, may be the problem extension.

3 **Turn extensions back on, one extension at a time, in the Extensions Manager control panel. Restart the computer after turning on each extension and test to see if the problem reoccurs.**

When you have located the problem extension, remove it from the System Folder and contact the developer or vendor for compatibility information.

4 **Go to the next section if you are still having problems.**

Testing and repairing your hard disk

If you see a message reporting that a disk is damaged or unreadable, you may need to repair the disk.

Try these suggestions first

If you can't start up from a hard disk or you don't see the hard disk icon on the desktop, try the following:

- If the hard disk is internal, shut down your Macintosh, wait at least 10 seconds, and then turn it on again.
- If the hard disk is external, shut down your Macintosh, make sure that the hard disk is turned on, and that its cable is connected firmly; then restart the Macintosh.
- If the hard disk is your startup disk, start up with a different startup disk. (See "Starting Up From the System Software CD-ROM Disc," later in this chapter.)

  If, after you start up from a different disk, your hard disk's icon appears on your desktop, reinstall system software on the hard disk. See "Installing System Software" later in this chapter.
- Check the ID numbers of all SCSI equipment (anything connected to the SCSI port [⇳]) on your computer. For information on setting SCSI ID numbers and terminating a SCSI chain, see the manuals that came with your SCSI equipment. See also Chapter 7 ("Connecting Additional Equipment") of the User's Manual on the *Power Macintosh User's Manual* CD-ROM disc.
- If none of these suggestions solves the problem, test the disk by following the instructions given in "Testing for Damage on Your Hard Disk," which follows.

Testing for damage on your hard disk

You can test a hard disk for damage with the Drive Setup program, which is on the system software CD-ROM disc that came with your computer.

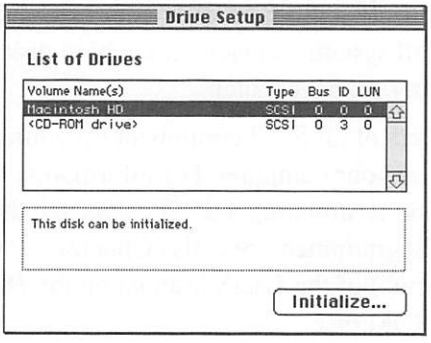
1 **Start up your computer from the system software CD-ROM disc that came with your computer.**

See "Starting Up From the System Software CD-ROM Disc" later in this chapter.

2 **Locate the Drive Setup icon and double-click it to open the Drive Setup program.**

Drive Setup

3 **In the list of drives, click the disk you want to test.**



4 **From the Functions menu, choose Test Disk.**

5 **When a message tells you that the testing is complete, click Quit.**

If the test reveals a problem, you may be able to correct it by using Disk First Aid or another disk repair program (see the instructions in the next section) or you may need to reinitialize the disk (see "Initializing a Hard Disk" later in this chapter). Consult an Apple-authorized service provider for assistance if necessary. If you had a hard disk from another manufacturer installed after you bought your computer, use the software that came with the disk or contact the disk vendor to get the latest version of software.

Repairing a damaged disk

You can repair some types of disk damage by using the Disk First Aid program, which is on the system software CD-ROM disc that came with your computer.

1 Start up your computer from the system software CD-ROM disc that came with your computer.

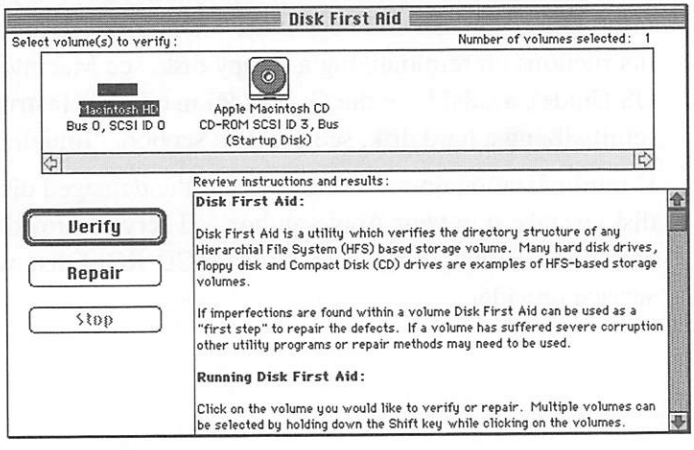
See "Starting Up From the System Software CD-ROM Disc" later in this chapter.

2 Locate the Disk First Aid icon and double-click it to open the Disk First Aid program.

Disk First Aid

3 Click the icon of the disk you want to test.

Disk icons appear in a box at the top of the Disk First Aid window.


Disk First Aid
Select volume(s) to verify:
Number of volumes selected: 1
Macintosh HD
Bus 0, SCSI ID 0
Apple Macintosh CD
CD-ROM SCSI ID 3, Bus
(Startup Disk)
Review instructions and results:
Verify
Repair
Stop
Disk First Aid:
Disk First Aid is a utility which verifies the directory structure of any Hierarchial File System (HFS) based storage volume. Many hard disk drives, floppy disk and Compact Disk (CD) drives are examples of HFS-based storage volumes.
If imperfections are found within a volume Disk First Aid can be used as a "first step" to repair the defects. If a volume has suffered severe corruption other utility programs or repair methods may need to be used.
Running Disk First Aid:
Click on the volume you would like to verify or repair. Multiple volumes can be selected by holding down the Shift key while clicking on the volumes.

4 **Click Repair to begin testing and repairing the disk.**

You can't repair the startup disk or the disk that contains the Disk First Aid program, but you can test these disks by clicking Verify. If the program reveals a problem with either of these disks, start up the computer from another disk so that you can repair the damaged disk.

If you want to test and repair another disk, click its icon and then click Repair.

5 **When testing and repair are done, choose Quit from the File menu.**

If Disk First Aid cannot correct the problem

- Try repairing the disk again. Sometimes repeating the process corrects the problem.
- Use another disk repair or recovery program. Some disk repair programs let you recover information from a damaged disk.
- Consult an Apple-authorized service provider for help.
- If you can't repair the disk, you'll need to reinitialize it, which erases all the information on it. Before you reinitialize, be sure you recover all the information you can and back it up. Then erase (reinitialize) the disk. For instructions on reinitializing a floppy disk, see Macintosh Guide (or Mac OS Guide), available in the Guide (?) menu. For instructions on reinitializing a hard disk, see the next section, "Initializing a Hard Disk."

  If reinitialization doesn't work, discard the damaged disk (if it's a floppy disk) or take it to your Apple-authorized service provider for repair (if it's a hard disk). Bring your system software CD-ROM disc with you to the service provider.

Initializing a hard disk

The hard disk inside your computer was initialized (formatted for use) at the factory, so you shouldn't need to initialize it. You need to initialize a hard disk only if one of the following is true:

- You purchase an uninitialized hard disk from another manufacturer.
- Your hard disk is damaged and can't be repaired with Disk First Aid.

If a hard disk needs to be initialized, its icon does not appear on the desktop when you start up the computer using another disk.

You initialize your internal hard disk using a program called Drive Setup, which is on the system software CD-ROM disc that came with your computer.

WARNING Initializing a disk erases any information that may be on it. Before you initialize a damaged disk, try to repair it as described in "Repairing a Damaged Disk" earlier in this chapter.

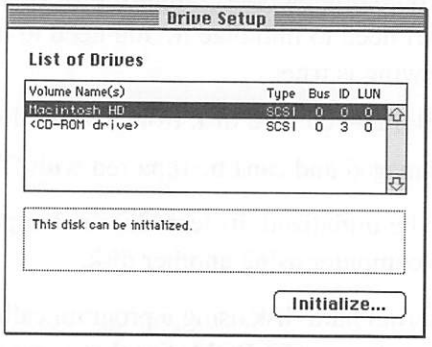
1 **Start up your computer from the system software CD-ROM disc that came with your computer.**

See "Starting Up From the System Software CD-ROM Disc" later in this chapter.

2 **Locate the Drive Setup icon and double-click it to open the Drive Setup program.**

Drive Setup

3 **In the list of drives, click the disk you want to initialize.**



4 **Click Initialize to initialize the hard disk.**

5 **Click Quit when you see a message reporting that initialization was successful.**

If a message reports that initialization failed, try again. If initialization fails a second time, take the disk to your Apple-authorized service provider for repair.

Starting up from the system software CD-ROM disc

To test, repair, or initialize a hard disk, or to install or remove system software on a hard disk, you need to start up your computer from another disk. You can start up your computer using the system software CD-ROM disc.

The procedure for starting up from the CD-ROM disc varies depending on the condition of the system software on your hard disk. To find out which procedure to use, you must turn on your Macintosh.

The steps that follow tell how to start up from a CD-ROM disc, depending on what you see on your screen.

If you see a blinking question mark on your screen

The blinking question mark means that your Macintosh is unable to find usable system software on your hard disk.

1. **Press the Open/Close button of your CD-ROM drive to open the CD-ROM tray.**
2. **Place the CD-ROM disc in the tray with the disc label facing up.**
3. **To close the tray, push the tray in or press the Open/Close button.**

   Your Macintosh recognizes the CD-ROM disc as a startup disk, and in a few seconds the Macintosh desktop appears.

If you see the Macintosh desktop

1. **Press the Open/Close button of your CD-ROM drive to open the CD-ROM tray.**
2. **Place the CD-ROM disc in the tray with the disc label facing up.**
3. **To close the tray, push the tray in or press the Open/Close button.**
4. **Hold down the C key on your keyboard while you choose Restart from the Special menu.**

   Continue to hold down the C key until you see the "Welcome to Macintosh" message.

Installing system software

Your Macintosh came with all the necessary system software installed on its internal hard disk, so you don't need to install system software on that disk unless you encounter software problems.

When should you install system software?

- You have a new hard disk or a newly initialized hard disk that does not yet contain system software. Follow the instructions in "Performing a Normal or Easy Installation of System Software" later in this section.
- You want to upgrade to a more recent version of system software. Follow the instructions that came with your system software upgrade, or the ones in "Performing a Normal or Easy Installation of System Software" later in this section.

IMPORTANT If you're having a problem with your system software, you may not need to reinstall system software. If you see an icon like this in the middle of the screen, follow the instructions in "Testing and Repairing Your Hard Disk" earlier in this chapter to test your startup hard disk and repair any damage.

If repairing the disk doesn't help, follow the instructions that follow to reinstall system software on your startup hard disk.

Performing a normal or easy installation of system software

Follow the steps in this section to do what is commonly called a "normal" or easy installation of system software.

If you're installing system software on a hard disk for the first time, make sure that your hard disk has been initialized, a process that prepares the disk to store information. If you see the hard disk's icon on the desktop when you start up the computer, the disk has been initialized. If no disk icon appears when you start up, see the section "Initializing a Hard Disk" earlier in this chapter for instructions.

To perform a normal installation, follow these steps:

1 **Start up your computer from the CD-ROM disc that contains system software.**

Do this by inserting the CD-ROM disc into the CD-ROM drive and holding down the C key while you restart the computer. For detailed steps, see "Starting Up From the System Software CD-ROM Disc" earlier in this chapter.

2 **Find and open the Disk First Aid icon.**

You may need to look in a folder called Utilities to find Disk First Aid.

Disk First Aid

After Disk First Aid starts, follow the instructions on the screen to verify your disk. Disk First Aid checks your hard disk for any problems.

3 **When the verification process stops, check the results in the Disk First Aid window.**

If the results indicate that your hard disk appears to be OK, choose Quit from the File menu. If Disk First Aid finds a problem, see "Repairing a Damaged Disk" in the section "Testing and Repairing Your Hard Disk," earlier in this chapter.

4 **Find and open the Drive Setup icon.**

You use the Drive Setup program to update your hard disk. You may need to look in a folder called Utilities to find Drive Setup.

5 **In the list of drives, click your startup disk.**

6 **Choose Update Driver from the Functions menu.**

7 **When the update process is finished, quit Drive Setup.**

8 **Shut down your computer.**

9 **Start up your computer from the CD-ROM disc that contains system software.**

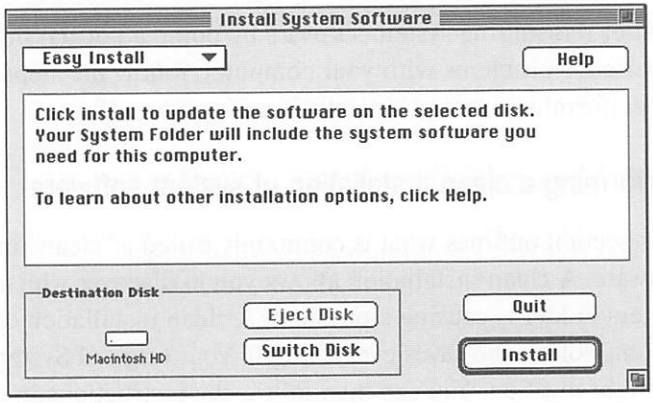
Do this by inserting the CD-ROM disc into the CD-ROM drive and holding down the C key while you restart the computer. For detailed steps, see "Starting Up From the System Software CD-ROM Disc" earlier in this chapter.

10 **Find and open the Installer icon.**

The Installer's "welcome" screen appears.

11 **Click Continue.**

The Easy Install dialog box appears.



12 **Make sure that the hard disk named in the Destination Disk box is the one on which you want to install system software.**

If it isn't, click Switch Disk until the correct disk name appears.

13 **Click Install.**

14 **Follow the onscreen instructions.**

15 **When you see a message reporting that the installation was successful, click Restart.**

If your computer does not start up properly, see "If the Installation was not Successful," next.

16 **If necessary, install or reinstall other software that may be missing from your startup disk.**

If you erased your hard disk prior to installing system software, certain system extensions or application programs that were originally on your hard disk may need to be reinstalled. Some additional extensions and programs are on the CD-ROM disc that contains system software. System extensions or application programs from other vendors can be reinstalled from their installation disks.

If the installation was not successful

If a message reports that installation was not successful, try installing again. (Follow the instructions on the screen.)

If, after reinstalling system software by doing a normal installation, you still experience problems with your computer, follow the steps in the next section for performing a "clean" installation of system software.

Performing a clean installation of system software

This section outlines what is commonly called a "clean" installation of system software. A clean installation allows you to discover which item in your System Folder is causing a problem. A clean installation creates a brand new System Folder and saves everything in your original System Folder in a different location. You can then follow the instructions in "Replacing Your Special Software" later in this section to reinstall system extensions, control panels, and other special software one at a time from the old System Folder to the new System Folder. This procedure allows you to determine which item in the old System Folder was the source of the problem.

Perform a clean installation if you can't determine what is damaged in your System Folder (especially if you think any special software, such as control panels, system extensions, or custom utilities, may be causing the problems you're experiencing). You should also perform a clean installation if you're still having problems with your computer after you've reinstalled system software by performing a normal installation.

To perform a clean installation, follow these steps:

1 **Start up your computer from the CD-ROM disc that contains system software.**

Do this by inserting the CD-ROM disc into the CD-ROM drive and holding down the C key while you restart the computer. For detailed steps, see "Starting Up From the System Software CD-ROM Disc" earlier in this chapter.

2 **Find and open the Disk First Aid icon.**

You may need to look in a folder called Utilities to find Disk First Aid.

Disk First Aid

After Disk First Aid starts, follow the instructions on the screen to verify your disk. Disk First Aid checks your hard disk for any problems.

3 **When the verification process stops, check the results in the Disk First Aid window.**

If the results indicate that your hard disk appears to be OK, choose Quit from the File menu. If Disk First Aid finds a problem, see "Repairing a Damaged Disk" earlier in this chapter.

4 **Find and open the Drive Setup icon.**

Drive Setup

You use the Drive Setup program to update your hard disk. You may need to look in a folder called Utilities to find Drive Setup.

5 **In the list of drives, click your startup disk.**

6 **Choose Update Driver from the Functions menu.**

7 **When the update process is finished, quit Drive Setup.**

8 **Shut down your computer.**

9 **Start up your computer from the CD-ROM disc that contains system software.**

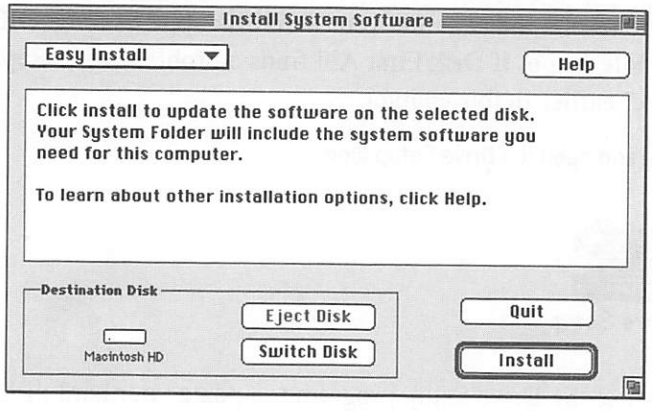
Do this by inserting the CD-ROM disc into the CD-ROM drive and holding down the C key while you restart the computer. For detailed steps, see "Starting Up From the System Software CD-ROM Disc" earlier in this chapter.

10 **Find and open the Installer icon.**

The Installer's "welcome" screen appears.

11 **Click Continue.**

The Easy Install dialog box appears.

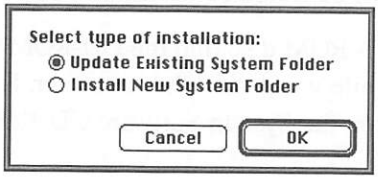


12 **Make sure that the hard disk named in the Destination Disk box is the one on which you want to install system software.**

If it isn't, click Switch Disk until the correct disk name appears.

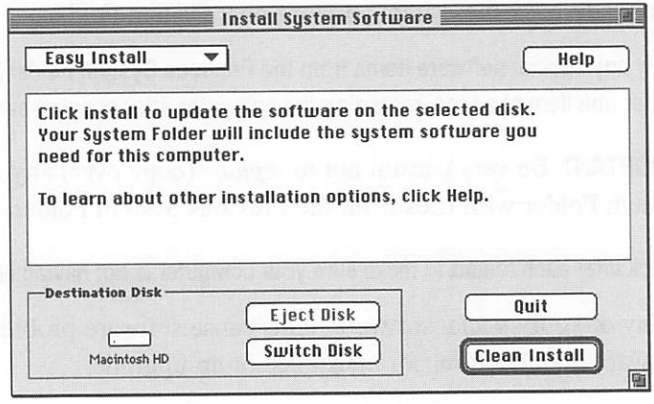
13 **Press Shift–⌘–K.**

The following dialog box appears.



14 **Click the Install New System Folder button and click OK.**

The Easy Install dialog box appears. The Install button has changed to Clean Install, and the contents of your old System Folder have been moved to a new folder named Previous System Folder.


Install System Software
Easy Install
Help
Click install to update the software on the selected disk.
Your System Folder will include the system software you need for this computer.
To learn about other installation options, click Help.
Destination Disk
Macintosh HD
Eject Disk
Switch Disk
Quit
Clean Install

15 **Click Clean Install, and follow the instructions that appear on the screen.**

It takes a few minutes to complete the installation.

16 **When the installation is complete you see a message reporting that the installation was successful.**

If a Restart button appears, click it to restart your computer, and remove the system software CD-ROM disc from the CD-ROM drive.

If a message reports that installation was not successful, try repeating the clean installation procedure.

Replacing your special software

Special software consists of items such as control panels, system extensions, custom utilities, fonts, or Apple Menu Items that you may have added to your old System Folder. To make sure that special software does not create any conflicts with other programs on your computer, follow this procedure to safely add back these items in your new System Folder:

1 **Copy any special software items from the Previous System Folder back to your System Folder one item at a time, restarting the computer after copying each item.**

IMPORTANT Be very careful not to *replace* (copy over) any of the files in the System Folder with files from the Previous System Folder.

2 **Check after each restart to make sure your computer is not having any software problems.**

If any of your special software items cause software problems, contact the software manufacturer for assistance or an upgrade.

If you erased your hard disk prior to installing system software, certain system extensions or application programs that were originally on your hard disk may need to be reinstalled. Some additional extensions and programs are on the CD-ROM disc that contains system software. System extensions or application programs from other vendors can be reinstalled from their installation disks.

Performing a custom installation

For most Macintosh users, the Easy Install procedure described in the previous sections is appropriate because it automatically installs all the items you need. However, if you'd like to select a combination of system software files for your specific needs, you can customize your system software installation. You use custom installation to install or update one or more specific files, or to save space on your hard disk by installing only the files you want.

To install customized system software, follow these steps:

1 **Start up your computer from the CD-ROM disc that contains system software.**

Do this by inserting the CD-ROM disc into the CD-ROM drive and holding down the C key while you restart the computer. For detailed steps, see "Starting Up From the System Software CD-ROM Disc" earlier in this chapter.

2 **Find and open the Disk First Aid icon.**

You may need to look in a folder called Utilities to find Disk First Aid.

Disk First Aid

After Disk First Aid starts, follow the instructions on the screen to verify your disk. Disk First Aid checks your hard disk for any problems.

3 **When the verification process stops, check the results in the Disk First Aid window.**

If the results indicate that your hard disk appears to be OK, choose Quit from the File menu. If Disk First Aid finds a problem, see "Repairing a Damaged Disk" earlier in this chapter.

4 **Find and open the Drive Setup icon.**

You use the Drive Setup program to update your hard disk. You may need to look in a folder called Utilities to find Drive Setup.

5 **In the list of drives, click your startup disk.**

6 **Choose Update Driver from the Functions menu.**

7 **When the update process is finished, quit Drive Setup.**

8 **Shut down your computer.**

9 **Start up your computer from the CD-ROM disc that contains system software.**

Do this by inserting the CD-ROM disc into the CD-ROM drive and holding down the C key while you restart the computer. For detailed steps, see "Starting Up From the System Software CD-ROM Disc" earlier in this chapter.

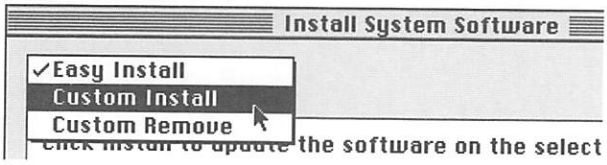
10 **Find and open the Installer icon.**

The Installer's "welcome" screen appears.

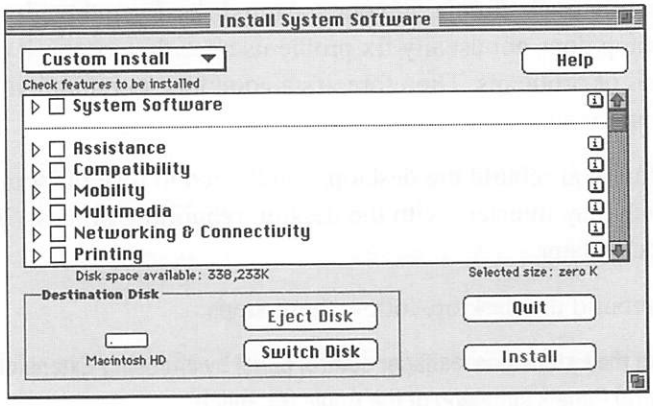
11 **Click Continue.**

The Easy Install dialog box appears.

12 **Choose Custom Install from the pop-up menu.**



The Custom Install dialog box appears, listing all available system software components.



13 **Make sure that the hard disk named in the Destination Disk box is the one on which you want to install system software.**

If it isn't, click Switch Disk until the correct disk name appears.

14 **Scroll through the list of components, clicking the checkbox next to each component you want to install.**

To get additional information about each component listed, click the box with the letter *i* in it to the right of the component.

15 **Click Install.**

16 **Follow the instructions that appear on the screen.**

17 **When you see a message reporting that the installation was successful, click Quit.**

If a message reports that installation was not successful, try installing again. (Follow the instructions on the screen.)

18 **Restart your Macintosh.**

The system software is installed and your computer is ready to use. Don't forget to eject the CD-ROM disc containing system software when you are finished.

Rebuilding your desktop

A procedure known as "rebuilding the desktop" helps your Macintosh to keep accurate track of data on your startup disks. Even though rebuilding the desktop does not usually fix problems once they occur, it does prevent some types of problems. Therefore, it's a good idea to rebuild your desktop once a month or so.

Before you rebuild the desktop, you'll need to turn off some extensions, which may interfere with the desktop rebuilding process. You'll turn them back on later.

To rebuild the desktop, follow these steps:

1. **Open the Extensions Manager control panel by choosing Extensions Manager from the Control Panels submenu of the Apple (🍎) menu.**
2. **From the Sets pop-up menu, choose Save Set.**
3. **In the Save Set dialog box, type a name for your currently selected extensions (for example, "My Extensions") and click OK. The name of your set is added to the Sets pop-up menu.**

   This saves your current set of extensions.
4. **Choose All Off from the Sets pop-up menu to turn off all extensions.**
5. **Turn on Macintosh Easy Open by clicking it in the list so that a checkmark appears beside it.**

   You can find Macintosh Easy Open by scrolling down the list of extensions. Macintosh Easy Open appears under the heading "Control Panels."
6. **Restart your computer while holding down the Command (⌘) and Option keys.**

   Hold down the ⌘ and Option keys until you see the dialog box that asks if you're sure you want to rebuild your desktop file. When the dialog box appears, you can release the keys.

7 **Click OK.**

The computer rebuilds the desktop. This can take several minutes.

IMPORTANT Do not stop the desktop-rebuilding process. Doing so could damage your system files.

8 **Open the Extensions Manager control panel by choosing Control Panels from the Apple (🍎) menu. When the Control Panels window appears, double-click the Extensions Manager icon.**

9 **From the Sets pop-up menu, choose the name you gave your set of extensions in step 3.**

This turns your original set of extensions back on.

10 **Restart your computer to activate the extensions.**

Appendix

Appendix A Health, Safety, and Maintenance Tips

Read this appendix for important health and safety instructions, as well as tips on keeping your computer in good working order.

Appendix A
Health, Safety, and Maintenance Tips

For your own safety and that of your equipment, follow all the instructions in this chapter. Keep these instructions available for reference by you and others.

Health-related information about computer use

Muscle soreness, eye fatigue, and other discomforts and injuries sometimes associated with using computers can occur from performing any number of activities. In fact, misuse of the same muscles during multiple activities can create a problem that might not otherwise exist. For example, if you engage in nonwork activities that involve repetitive stress on the wrist—such as bicycling—and also use your computer's keyboard improperly, you may increase your likelihood of developing wrist problems. Some individuals are at greater risk of developing these problems because of their health, physiology, lifestyle, and general exposure to stress. Work organization and conditions, such as workstation setup and lighting, also play a part in your overall health and comfort. Preventing health problems is a multifaceted task that requires careful attention to the way you use your body every hour of every day.

The most common health effects associated with using a computer are musculoskeletal discomfort and eye fatigue. We'll discuss each area of concern.

Musculoskeletal discomfort

As with any activity that involves sitting for long periods of time, using a computer can make your muscles sore and stiff. To minimize these effects, set up your work environment carefully, using the guidelines that follow, and take frequent breaks to rest tired muscles. To make working with your computer more comfortable, allow enough space in your work area so that you can change position frequently and maintain a relaxed posture.

Another type of musculoskeletal concern is repetitive stress injuries (RSIs), also known as cumulative trauma disorders (CTDs). These problems can occur when a certain muscle or tendon is repeatedly overused and forced into an unnatural position. The exact causes of RSIs are not totally understood, but in addition to awkward posture, such factors as the amount of repetition, the force used in the activity, the individual's physiology, workplace stress level, and lifestyle may affect the likelihood of experiencing an RSI.

RSIs did not suddenly arise when computers were invented; tennis elbow and writer's cramp, for example, are two RSIs that have been with us for a long time. Although less common than other RSIs, one serious RSI discussed more often today is a wrist problem called carpal tunnel syndrome, which may be aggravated by improper use of computer keyboards. This nerve disorder results from excessive pressure on the median nerve as it passes through the wrist to the hand.

This section offers advice on setting up your work area to enhance your comfort while you use your computer. Since the effects of repetitive movements associated with using a computer can be compounded by those of other work and leisure activities to produce or aggravate physical problems, proper use of your computer system must be considered as just one element of a healthy lifestyle.

No one, of course, can guarantee that you won't have problems even when you follow the most expert advice on using computer equipment. You should always check with a qualified health specialist if muscle, joint, or eye problems occur.

Eye fatigue

Eye fatigue can occur whenever the eyes are focused on a nearby object for a long time. This problem occurs because the eye muscles must work harder to view an object that's closer than about 20 feet (about 6 meters). Improper lighting can hasten the development of eye fatigue. Although eye fatigue is annoying, there's no evidence that it leads to permanent damage.

Whenever you're engaged in an activity that involves close-up work—such as reading a magazine, doing craft work, or using a computer—be sure to have sufficient glare-free lighting and give your eyes frequent rest breaks by looking up and focusing on distant objects. Remember to have your eyes examined regularly.

To prevent discomfort and eye fatigue:

- Arrange your work space so that the furniture is properly adjusted for you and doesn't contribute to an awkward working posture.
- Take frequent short breaks to give your muscles and eyes a chance to rest.

Arranging your office

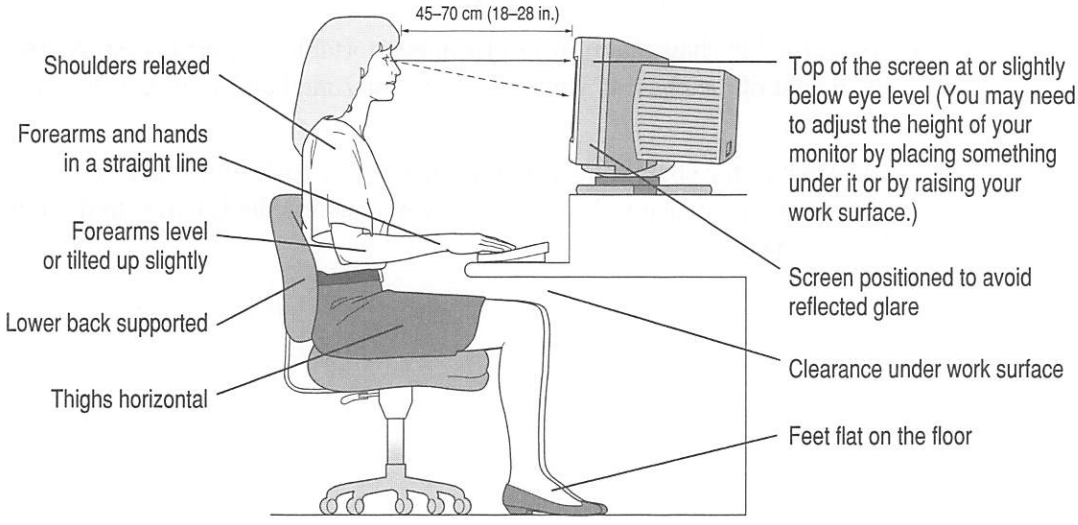
Here are some guidelines for adjusting the furniture in your office to accommodate your physical size and shape.

- An adjustable chair that provides firm, comfortable support is best. Adjust the height of the chair so your thighs are horizontal and your feet flat on the floor.

  The back of the chair should support your lower back (lumbar region). Follow the manufacturer's instructions for adjusting the backrest to fit your body properly.

- When you use the computer keyboard, your shoulders should be relaxed. Your upper arm and forearm should form an approximate right angle, with your wrist and hand in roughly a straight line.

  You may have to raise your chair so your forearms and hands are at the proper angle to the keyboard. If this makes it impossible to rest your feet flat on the floor, you can use a footrest with adjustable height and tilt to make up for any gap between the floor and your feet. Or you may lower the desktop to eliminate the need for a footrest. Another option is to use a desk with a keyboard tray that's lower than the regular work surface.
- Position the mouse at the same height as your keyboard. Allow adequate space to use the mouse comfortably.
- Arrange the monitor so the top of the screen is slightly below your eye level when you're sitting at the keyboard. The best distance from your eyes to the screen is up to you, although most people seem to prefer 18 to 28 inches (45 to 70 cm).
- Position the monitor to minimize glare and reflections on the screen from overhead lights and windows. You may want to use a tiltable monitor stand. The stand lets you set the monitor at the best angle for viewing, helping to reduce or eliminate glare from lighting sources you can't move.


45–70 cm (18–28 in.)
Shoulders relaxed
Forearms and hands in a straight line
Forearms level or tilted up slightly
Lower back supported
Thighs horizontal
Top of the screen at or slightly below eye level (You may need to adjust the height of your monitor by placing something under it or by raising your work surface.)
Screen positioned to avoid reflected glare
Clearance under work surface
Feet flat on the floor

Avoiding fatigue

- Change your seated position, stand up, or stretch whenever you start to feel tired. Frequent short breaks are helpful in reducing fatigue.
- Use a light touch when typing or using a mouse and keep your hands and fingers relaxed.
- Some computer users may develop discomfort in their hands, wrists, or arms after intensive work without breaks. If you begin to develop chronic pain or discomfort in your hands, wrists, or arms, consult a qualified health specialist.
- Allow adequate work space so that you can use your keyboard and mouse comfortably. Place papers or other items so you can view them easily while using your computer. A document stand may make reading papers more comfortable.
- Eye muscles must work harder to focus on nearby objects. Occasionally focus your eyes on a distant object, and blink often while you work.
- Clean your screen regularly. Keeping the screen clean helps reduce unwanted reflections.

What about electromagnetic emissions?

There has been recent public discussion of the possible health effects of prolonged exposure to extremely low frequency (ELF) and very low frequency (VLF) electromagnetic fields. Such fields are associated with electromagnetic sources such as television sets, electrical wiring, and some household appliances—as well as computer monitors.

Apple has reviewed scientific reports and sought the counsel of government regulatory agencies and respected health organizations. Based on the prevailing evidence and opinions, Apple believes that the electric and magnetic fields produced by computer monitors do not pose a health risk.

In response to those customers who wish to reduce their exposure to electromagnetic fields, Apple has lowered the emission levels of our products. We are also actively encouraging further scientific research so we can continue to promote the health and safety of our customers and employees.

Safety instructions

For your own safety and that of your equipment, always take the following precautions.

Turn off the computer completely and disconnect the power plug (by pulling the plug, not the cord) if any of the following conditions exists:

- the power cord or plug becomes frayed or otherwise damaged
- you spill something into the case
- your Macintosh is exposed to rain or any other excess moisture
- your Macintosh has been dropped or the case has been otherwise damaged
- you suspect that your Macintosh needs service or repair
- you want to clean the case (use only the recommended procedure described later in this chapter)

Be sure that you always do the following:

- Read all the installation instructions carefully before you plug your Macintosh into a wall socket.
- Keep these instructions handy for reference by you and others.
- Follow all instructions and warnings dealing with your system.
- Keep your Macintosh away from sources of liquids, such as washbasins, bathtubs, shower stalls, and so on.
- Protect your Macintosh from dampness or wet weather, such as rain, snow, and so on.

WARNING Electrical equipment may be hazardous if misused. Operation of this product, or similar products, must always be supervised by an adult. Do not allow children access to the interior of any electrical product and do not permit them to handle any cables.

Handling your computer equipment

Follow these guidelines for handling your computer and its components:

- When setting up your computer, place components on a sturdy, flat surface, and carefully follow all setup instructions.
- When connecting or disconnecting a cable, always hold the cable by its connector (the plug, not the cord).
- Turn off your computer and all its components before connecting or disconnecting any cables to add or remove any component. Failure to do so could seriously damage your equipment.
- Never force a connector into a port. If the connector and port do not join with reasonable ease, they probably don't match. Make sure that the connector matches the port and that you have positioned the connector correctly in relation to the port.
- Take care not to spill any food or liquid on the computer, keyboard, mouse, or other components. If you do, turn your computer off immediately and unplug it before cleaning up the spill. Depending on what you spilled and how much of it got into your equipment, you may have to bring your equipment to an Apple-authorized service provider.
- Protect the computer and its components from direct sunlight and rain or other moisture.
- Keep all ventilation openings clear and unobstructed. Without proper air circulation, components can overheat, causing damage or unreliable operation.

WARNING This equipment is intended to be electrically grounded. Your Macintosh is equipped with a three-wire grounding plug—a plug that has a third (grounding) pin. This plug will fit only a grounded AC outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact a licensed electrician to replace the outlet with a properly grounded outlet. Do not defeat the purpose of the grounding plug!

Handling the monitor

Follow these procedures for handling a monitor:

- Make sure that the ventilation openings on the computer and the monitor are clear and unobstructed.
- If your computer is a desktop model, some large monitors cannot safely be placed on top of it. See Chapter 1, "Setting Up Your Computer," for information about the maximum monitor weight your computer can support.
- If there is interference on the monitor's screen or on a television or radio near your computer, move the affected equipment farther away.

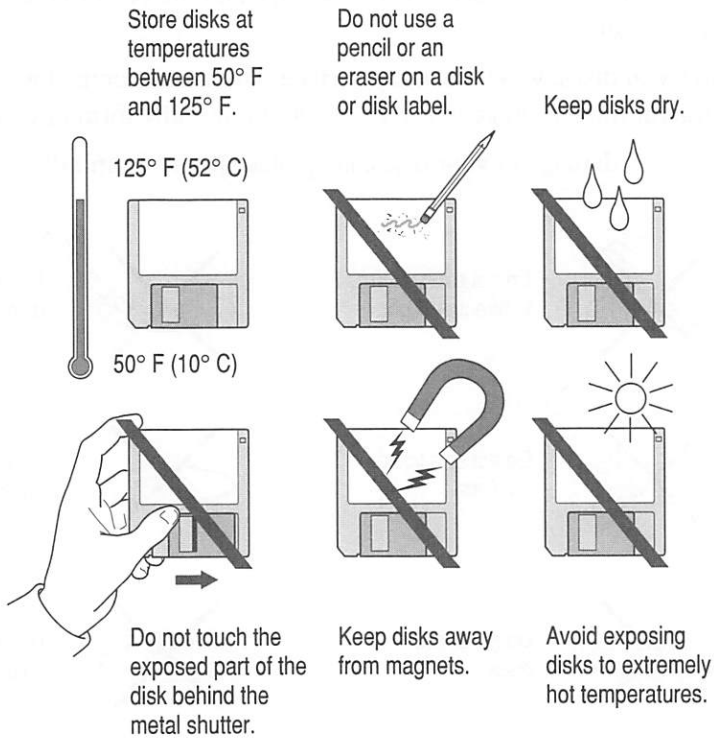
Handling the keyboard

Take care not to spill any liquid on the keyboard. If you do, turn off your computer immediately.

- If you spill liquid that is thin and clear, unplug the keyboard, turn it upside down to let the liquid drain out, and let it dry for 24 hours at room temperature. If, after you take these steps, the keyboard doesn't work, take it to an Apple-authorized service provider for repair.
- If you spill liquid that is greasy, sweet, or sticky, unplug the keyboard and take it to an Apple-authorized service provider for repair.

Handling floppy disks

Follow these procedures for handling floppy disks.


Store disks at temperatures between 50° F and 125° F.
125° F (52° C)
50° F (10° C)
Do not use a pencil or an eraser on a disk or disk label.
Keep disks dry.
Do not touch the exposed part of the disk behind the metal shutter.
Keep disks away from magnets.
Avoid exposing disks to extremely hot temperatures.

Handling CD-ROM discs

Keep these important safety instructions in mind as you use CD-ROM discs:

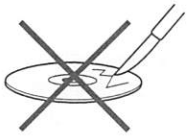
- Hold a disc by the edges or by one edge and the center hole. Do not touch the disc surface.
- To clean discs, wipe the shiny surface with a soft damp cloth, working in straight lines from center to edge. Do not use any form of cleaning agent.
- To avoid damage to your discs, keep these points in mind:

Do not expose discs to direct sunlight.

Do not write on discs.

Do not spill liquids on discs.

Do not put tape on discs.



Do not scratch discs.

Do not get dust on discs.

Other important safety instructions to keep in mind as you use your CD-ROM drive.

- Position your computer so that when the tray opens, it doesn't bump into anything.
- Do not leave the disc tray open. If dust gets on the lens of the CD-ROM drive, the drive may have problems reading your compact discs.
- Do not put anything (for instance, a cup) on top of the tray when it is open.
- Do not force the tray open by hand.
- Do not wipe the lens with a paper towel or other abrasive surface. If you need to clean the lens, see an Apple-authorized service provider for a lens cleaner.

- Never transport your computer with a disc inside the CD-ROM drive.
- Keep your computer equipment away from any source of liquid (such as washbasins, bathtubs, and shower stalls). If you drink coffee or other beverages while you're at your computer, take care not to spill.
- Avoid exposing your equipment to damp or wet weather. If your system is near a window, be sure the window is closed in rainy weather.

The tray on your CD-ROM drive automatically closes when you shut down your computer. You should remove any CD-ROM disc in the CD-ROM drive before shutting down. To eject a CD-ROM disc, select the CD-ROM disc icon and choose Put Away from the File menu. (You can also drag the CD-ROM disc's icon to the trash.)

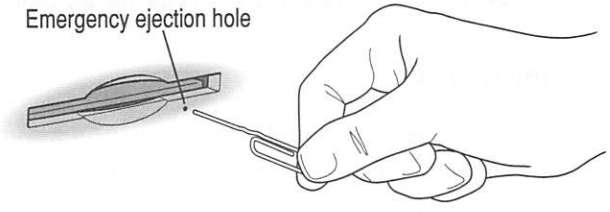
Ejecting a floppy disk

To eject a floppy disk, select the disk icon and choose Put Away from the File menu. (You can also drag the disk's icon to the trash.)

If you can't eject a floppy disk

If you can't eject a floppy disk in the usual way, try the following in order:

- Hold down the ⌘ and Shift keys and press the number 1 key at the upper left of your keyboard to eject a disk in the internal disk drive.
- Turn off the computer. If the disk isn't ejected, then hold down the button on your mouse or other pointing device while you turn the computer on again.
- Locate the small hole near the disk drive's opening, and carefully insert the end of a large straightened paper clip into it. Push gently until the disk is ejected. Do not use excessive force.



If nothing works, take the computer or disk drive to your Apple-authorized service provider to have the disk removed.

Power supply

The power supply in your computer is a high-voltage component and should not be opened for any reason, even when the computer is off. If the power supply needs service, contact your Apple-authorized dealer or service provider.

WARNING If you are using a Power Macintosh 7300 series computer, you should protect the power supply from damage by making sure that the voltage switch on the back of the computer is set correctly before you plug the computer into a power outlet. Refer to Chapter 1 for instructions on setting the voltage switch.

Cleaning your equipment

Follow these general rules when cleaning the outside of your computer and its components:

- Use a damp, soft, lint-free cloth to clean the computer's exterior. Avoid getting moisture in any openings.
- Don't use aerosol sprays, solvents, or abrasives.

Cleaning the computer case

To clean the case, do the following:

1. **Turn off the computer completely and then disconnect the power plug. (Pull the plug, not the cord.)**
2. **Wipe the surfaces lightly with a clean, soft cloth dampened with water.**

Cleaning the monitor

To clean the screen, put household glass cleaner on a soft cloth and wipe the screen. Don't spray the cleaner directly on the screen, because the liquid might drip into the monitor or computer.

Cleaning the mouse

The mouse contains a small ball that must roll smoothly for the mouse to work properly. You can keep this ball free of dirt and grease by using the mouse on a clean, lint-free surface and cleaning it occasionally.

You need a few cotton swabs and a clean, soft, lint-free cloth.

1 **Turn off your computer.**

2 **Turn the mouse upside-down and turn the plastic ring on the bottom counterclockwise to disengage it.**

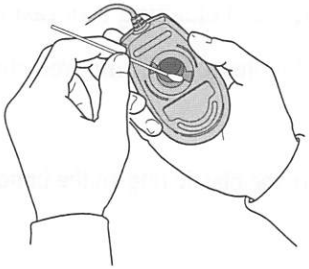
On some mouse devices, you may need to press the plastic ring (rather than turn it) to disengage it.

If the mouse is locked, see the next section, "Locking and Unlocking the Mouse," for instructions on how to unlock it.

3 **Turn the mouse right-side up with one hand and catch the ring and the ball with your other hand.**

4 **Clean the three small rollers inside the mouse with a cotton swab moistened with water.**

Rotate the rollers to clean all around them.



5 **Wipe the mouse ball with a clean, soft, dry, and lint-free cloth.**

6 **If necessary, wash the mouse ball with warm soapy water (use a mild soap such as a dishwashing liquid) and then dry the mouse ball thoroughly.**

7 **Gently blow into the mouse case to remove any dust that has collected there.**

8 **Put the ball and the ring back in place.**

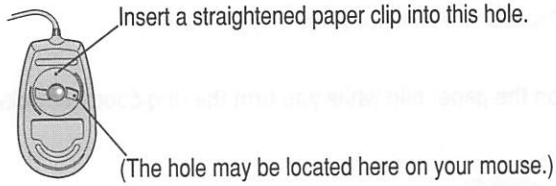
Your mouse should roll smoothly across your mouse pad or desk. If it doesn't, repeat these instructions carefully.

Locking and unlocking the mouse

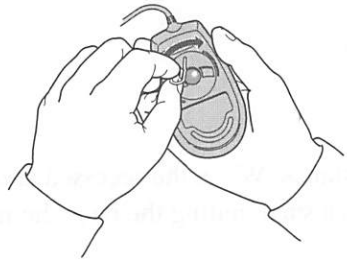
Some mouse devices can be locked so that the ball can't be removed. A locking mouse has a small hole on the plastic ring.

To lock the mouse, follow these steps:

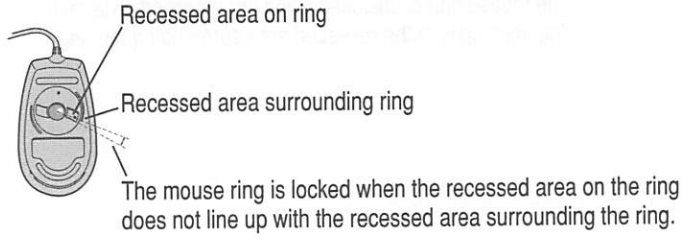
1 **Insert a straightened paper clip into the hole on the plastic ring.**



2 **Press down on the paper clip while you turn the ring clockwise.**

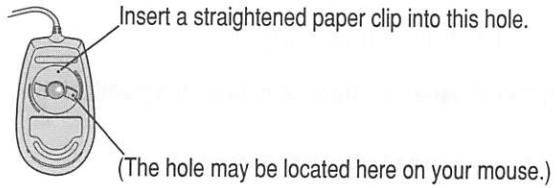


Turn the ring a very short distance, until it stops. When the recessed area on the ring is *not* lined up with the recessed area surrounding the ring, the mouse is locked.

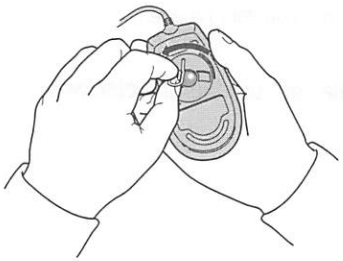

Recessed area on ring
Recessed area surrounding ring
The mouse ring is locked when the recessed area on the ring does not line up with the recessed area surrounding the ring.

To unlock the mouse, follow these steps:

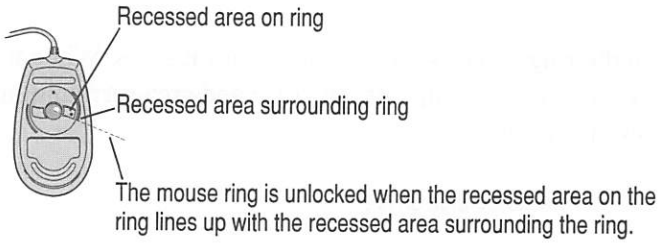
1 **Insert a straightened paper clip into the hole on the plastic ring.**



2 **Press down on the paper clip while you turn the ring counterclockwise.**



Turn the ring a very short distance. When the recessed area on the ring is lined up with the recessed area surrounding the ring, the mouse is unlocked.


Recessed area on ring
Recessed area surrounding ring
The mouse ring is unlocked when the recessed area on the ring lines up with the recessed area surrounding the ring.

Can't Find It? See also Macintosh Guide's onscreen index. Open the Guide (?) menu and choose Macintosh Guide (or Mac OS Guide); then click the Index button.

Index

A

About This Macintosh (Apple menu) 73
access privileges for shared items 101, 103
Acrobat Help 48, 52
Acrobat Reader 39, 45, 48–54
Actual Size button, Acrobat Reader 51
ADB cable 9–10, 16–17, 23–24
ADB ports
  on 7300 series computers 9–10
  on 8600 series computers 16–17
  on 9600 series computers 23–24
  connecting the mouse and keyboard to 25–27
Adobe Acrobat software 39, 45. *See also* Acrobat Reader
air circulation around computer components 6, 14, 21, 137
Apple Assistance Center 60
Apple-authorized dealers/service providers
  CD-ROM drive service vii, 82
  floppy disk drive service 89, 141
  hard disk service 64, 108, 110, 112
  interference with radio and television reception vi
  keyboard or mouse service 94, 96, 138
  obtaining peripheral devices and supplies vi, 140
  power supply service 142
  repair service and warranty questions 63
  replacing the computer's clock battery 97
  "sad Macintosh" icon appears 68
AppleCD Audio Player 82, 87
Apple CD-ROM extension 81, 84
Apple Desktop Bus. *See* ADB
Apple Extras folder 39
Apple Guide x, 36
Apple menu
  About This Macintosh 73
  Apple System Profiler 60–61
  identifying 40
Apple PlainTalk Microphone. *See* microphone
AppleShare extension 101
Apple System Profiler utility (Apple menu) 60–61
AppleTalk, turning off/on for troubleshooting 94, 99, 100, 101, 103

Can't Find It?
See also Macintosh Guide's onscreen index. Open the Guide (?) menu and choose Macintosh Guide (or Mac OS Guide); then click the Index button.

AppleTalk control panel 100, 102
Apple VideoPhone software 74
Application menu
  Finder 37
  Show All 80
  using 40
application programs
  allocating more memory to 73
  compatibility problems 80
  for debugging 97
  installing 117, 122
  "native" programs 80
  quit unexpectedly 75–77
  troubleshooting 73–80
  viewing version number of 76
arrow pointer on screen. *See* pointer
At Ease 71, 83
audio CDs, troubleshooting 87
audio track on a CD-ROM disc, troubleshooting 87

B

Balloon Help 38–39, 61
battery in computer's clock, replacing 97
blinking question mark icon 66, 113, 114
"bomb" message on screen 59, 75–77, 88
bookmarks, Acrobat Reader 48, 49
Bookmarks and Page button, Acrobat Reader 49
brightness control 31, 64

C

cables
  ADB 9–10, 16–17, 23–24
  checking connections 64, 94, 95
  keyboard
    connecting 25–27
    illustrations 12, 19, 25–26
    troubleshooting 94, 95
  monitor
    for 7300 series computers 2, 9–10
    for 8600 series computers 12, 16–17
    for 9600 series computers 19, 23–24
  mouse 25, 26, 94
  safety instructions for 136, 137
  troubleshooting connections 31
carpal tunnel syndrome 132
carrying a 7300 series computer 3
CD-ROM discs
  avoiding starting up from 71, 83
  cleaning 140
  damaged 85
  ejecting 54, 81, 82, 85, 141
  handling 54, 84, 85, 140–141
  inserting 47, 113
  ISO 9660– or High Sierra–format 86
  saving changed information 85
  starting up the computer from 68, 84, 112–113
  troubleshooting 83, 84–88
CD-ROM drive
  Open/Close button 47, 82–83
  safety instructions for 140–141
  troubleshooting 81–83
  vibrations in 83, 86
chair, adjusting for optimal support and comfort 133
Chooser
  checking network settings 100
  checking printer settings 99
  doesn't list the computer you want to connect to 101
  turning AppleTalk on/off 94, 100, 101
cleaning the equipment 140, 142–144
clean installation of system software 118–122
clock keeps time inaccurately 97
close box 41

closing
Acrobat Help 52
Acrobat Reader 54
a window 41
color depth, performance and 94
color display on a Photo CD, troubleshooting 88
⌘ (Command)-Control-Power keys, to restart the computer 59
⌘ (Command)-Option-Esc keys, to force a program to quit 71, 95
⌘ (Command)-Option keys, to rebuild the desktop 126
⌘ (Command)-Option-R-P keys, to reset PRAM and NVRAM 65
⌘ (Command)-period keys, to cancel the current operation 59, 75
⌘ (Command)-Shift-1 keys, to eject a floppy disk 89, 141
communications regulation information vi-vii
compatibility problems
application programs 80
control panels 77, 92, 96
system extensions 77, 92, 96, 105–106
computer components. *See* equipment
computer power cord
for 7300 series computers 2, 6
for 8600 series computers 12, 13–14
for 9600 series computers 19, 20–21
checking connections 64
disconnecting 6, 14, 21, 136
safety instructions 136
connecting
the monitor
7300 series computers 7–10
8600 series computers 14–17
9600 series computers 21–24
the mouse and keyboard 25–27
peripheral equipment 1, 11, 18
connectors, safety instructions for 137
contrast control 64
Control Panel Information (Apple System Profiler) 61
control panels
AppleTalk 100, 102
compatibility problems with 77, 92, 96
Easy Access 99
effects of resetting PRAM and NVRAM 65–66
Extensions Manager
CD-ROM drive problems 81, 84
file-sharing problems 103
floppy disk problems 90
locating problem extensions 106
printer problems 99
saving current extensions when rebuilding the desktop 126
typing produces nothing on screen 95, 96
File Sharing Monitor 101
General Controls 93
Keyboard 93
Memory 74, 80, 93
Monitors & Sound 94, 97
Mouse 94
PC Exchange 79, 90
Sharing Setup 101, 102, 103
Startup Disk 92
TCP/IP 100
viewing options 61
Views 94
Control Panels folder 84, 90
cumulative trauma disorders (CTDs) 132
customer support. *See also* Apple-authorized dealers/service providers
Apple Assistance Center 60
booklet described 57
hotline x, 36
custom installation of system software 123–125
Custom Install dialog box 125

Can't Find It?
See also Macintosh Guide's onscreen index. Open the Guide (?) menu and choose Macintosh Guide (or Mac OS Guide); then click the Index button.

D

damaged CD-ROM discs 85
damaged floppy disks 89, 91
damaged hard disks 107–110
debugging applications 97
deleting locked files 79
desktop
  looks different when you start up, troubleshooting 71, 83
  rebuilding 72, 126–127
Device Information (Apple System Profiler) 61
diagnostic techniques. *See also* error messages; troubleshooting
  checking system extension compatibility 77, 96, 105–106
  initializing a hard disk 111–112
  installing system software 114–125
  rebuilding the desktop 126–127
  starting up from the CD-ROM disc 112–113
  testing and repairing a hard disk 107–110
dialog boxes
  Custom Install 125
  Disk First Aid 109
  Drive Setup 108, 112
  Easy Install 117, 120, 121
  Energy Saver 29
  Print (Acrobat Reader) 53
disconnecting the computer 6, 14, 21, 136
disk cache 74, 93
Disk First Aid dialog box 109
Disk First Aid program 109–110, 115, 119, 123
disk-formatting programs, file sharing and 102
disk repair or recovery programs 108, 110
disks. *See* CD-ROM discs; floppy disks; hard disk
display. *See* monitors; screen
displaying
  information about your hardware and software 60–61
  a partially hidden window 41
documents. *See also* files
  in DOS/Windows format, working with 79, 90
  problems opening 78–79, 85
Drive Setup dialog box 108, 112
Drive Setup program
  initializing a hard disk 111–112
  installing system software 116, 119, 124
  testing a hard disk for damage 108

E

Easy Access 95, 99
easy installation of system software 115–118
Easy Install dialog box 117, 120, 121
Eject Disk (Special menu) 81, 82
ejecting
  CD-ROM discs 54, 81, 82, 141
  floppy disks 89, 141
electromagnetic emissions from monitors 135
emergency ejection hole
  on the CD-ROM drive 82
  on the floppy disk drive 89, 141
Empty Trash (Special menu) 42, 79
Energy Saver dialog box 29
energy-saving options, setting 29

equipment
arranging to prevent discomfort 133–134
cleaning 140, 142–144
displaying information about 60–61
guidelines for handling 137–142
illustrations
7300 series computers 2
8600 series computers 12
9600 series computers 19
error messages. *See also* diagnostic techniques; troubleshooting
"a file can't be found" 80
"application has unexpectedly quit" 75–77
"application program can't be found" 78
"a system error has occurred" 75
with blinking icons in the menu bar 98
blinking question mark 66, 113, 114
"bomb" message 59, 75–77, 88
disk with an X 67
font file problems 98
ID numbers for 58
"not enough memory" 73
printing problems 100
requesting to insert a disk after you've ejected it 81, 91
responding to 58
right-angle bracket (>) 97
"sad Macintosh" 68
"This disk is damaged: Do you want to initialize it?" 90
"This is not a Macintosh disk: Do you want to initialize it?" 84, 90
expansion cards 45
Extension Information (Apple System Profiler) 61
extensions. *See* system extensions
Extensions folder 101
Extensions Manager control panel. *See also* system extensions
CD-ROM drive problems 81, 84
file-sharing problems 103
floppy disk problems 90
locating problem extensions 77, 106
printer problems 99
saving current extensions when rebuilding the desktop 126
typing produces nothing on screen 95, 96
eye fatigue from computer use 131, 133, 135

F

fatigue from computer use 131, 133, 135
feet on keyboard, lowering 26
file compression programs 98
File menu
Get Info 73, 79, 100
Print (Acrobat Reader) 53
Put Away 54, 81, 82, 91, 141
Quit 81, 91
files. *See also* documents
accessing ISO 9660– and High Sierra–format files 86
deleting 79
on Photo CDs, troubleshooting 88
file sharing
hard disk space requirements for 101, 102
troubleshooting 79, 100–103

Can't Find It?
See also Macintosh Guide's onscreen index. Open the Guide (?) menu and choose Macintosh Guide (or Mac OS Guide); then click the Index button.

File Sharing folder 102
File Sharing Monitor control panel 101
Finder 37
First Page button, Acrobat Reader 50
Fit Size/Width buttons, Acrobat Reader 51
floppy disk drive, troubleshooting 89, 141
floppy disks
  damaged 89, 91
  ejecting 68, 89, 91, 141
  formatting on a DOS computer for use in a Macintosh 90
  initializing 90
  safety instructions for 139
  troubleshooting 89–91, 141
  unlocking 77, 79, 89
folders
  Apple Extras 39
  Control Panels 84, 90
  Extensions 101
  File Sharing 102
  Preferences 65, 102
  Previous System Folder 121, 122
  System Folder 61, 69, 78, 118–122
folder sizes calculations, performance and 94
font files, damaged 98
Foreign File Access extension 84, 86
furniture, arranging to prevent discomfort 133–134

G

General Controls control panel 93
Get Info (File menu) 73, 79, 100
Go Back/Go Forward buttons, Acrobat Reader 50
grounding the computer 6, 13, 20, 137
Guide menu. *See also* Macintosh Guide
  displaying 34–35, 38–39
  identifying 33
Guide window, moving or shrinking 37

H

handling equipment, guidelines for 137–142
Hand tool, Acrobat Reader 50
hard disk
  initializing 111–112
  testing and repairing 107–110
  troubleshooting 70, 92
  updating 116, 119, 124
hard disk space required for file sharing 101, 102
headphones 87
health-related information about computer use 131–135
help. *See also* Acrobat Help; Apple-authorized dealers/service providers; Balloon Help; customer support; error messages; Macintosh Guide; troubleshooting
  via the Internet 38
  where to find answers to questions x, 36
Hide Balloons (Guide menu) 38
High Sierra–format files 86
"Huh?" button, Guide window 37

I, J

icons
  ADB port 9, 16, 23, 25, 26
  appear different from usual 98
  Apple menu 40
  Application menu 40
  application program 42
  blinking in the menu bar 98, 99
  blinking question mark 66, 113, 114
  defined 42
  Disk First Aid 109, 115, 119, 123
  disk with an X 67
  Display Preferences 65
  document 42

Drive Setup 108, 111, 116, 119, 124
folder 42
Guide menu 33, 39, 40
hard disk 42
Install System Software 116, 120, 124
Read Me 39, 42
"sad Macintosh" 68
System Folder 42
Trash 42
User's Manual 48
ID numbers
for error messages 58
for SCSI devices 70, 107
image files on Photo CDs, troubleshooting 88
Index button, Macintosh Guide 37
initializing
a floppy disk 90
a hard disk 111–112
inserting, CD-ROM discs 47, 113
insertion point, setting 95
Installer program 116–117, 120–121, 124–125
installing
application programs 117, 122
file-sharing and network software 103
printer drivers 99–100
system extensions 117, 122
system software 114–125
interference
from electrical equipment 99
with radio and television reception vi, 138
Internet, getting help via 38
ISO 9660–format files 86

K

keyboard. *See also* Power key
checking connections 94, 95
connecting 25–27
illustrations 2, 12, 19
lowering the feet on 26
positioning 26, 27, 134
repeat rate adjustments 93
safety instructions for 138
troubleshooting 94–95
keyboard cable
connecting 25–27
illustrations 12, 19, 25–26
troubleshooting 94, 95
Keyboard control panel 93
keyboard tray 134

L

Last Page button, Acrobat Reader 50
lifting a 7300 series computer 3
liquid spills on the equipment 136, 137, 138, 140, 141
locked files 79
locked floppy disks 77, 79, 89
locking/unlocking the mouse 145–146
Look For button, Macintosh Guide 37

M

Macintosh Easy Open 126
Macintosh Guide (Guide menu)
overview ix, x, 36
for troubleshooting help 60
using 37
Macintosh Tutorial (Guide menu) 33–35, 38–39
Mac OS. *See* system software
Mac OS Guide. *See* Macintosh Guide
magnification box, Acrobat Reader 51

Can't Find It?
See also Macintosh Guide's onscreen index. Open the Guide (?) menu and choose Macintosh Guide (or Mac OS Guide); then click the Index button.

memory
  changing allocation of 73
  installing 45
  performance and 93
  printing and 100
  RAM disk 74, 93
  troubleshooting 73–77, 80, 88
  virtual memory 74, 93
Memory control panel 74, 80, 93
menu bar
  blinking icons in, troubleshooting 98, 99
  defined 40
menu blinking, performance and 93
menus, opening 40
microphone
  illustrations 2, 12, 19
  troubleshooting 97
Modern Memory Manager 80
moisture or wetness, computer exposure to 136, 137, 141
monitor cable
  for 7300 series computers 2, 9–10
  for 8600 series computers 12, 16–17
  for 9600 series computers 19, 23–24
monitor port
  on 7300 series computers 9
  on 8600 series computers 16
  on 9600 series computers 23
monitor power cord
  for 7300 series computers 7–8
  for 8600 series computers 14–15
  for 9600 series computers 21–22
monitor power socket
  on 7300 series computers 8
  on 8600 series computers 15
  on 9600 series computers 22
monitors. *See also* screen
  brightness control 31, 64
  cleaning 142
  connecting
    to 7300 series computers 7–10
    to 8600 series computers 14–17
    to 9600 series computers 21–24
  contrast control 64
  electromagnetic emissions from 135
  illustrations
    7300 series computers 2, 8–10
    8600 series computers 12, 15–17
    9600 series computers 19, 22–24
  maximum weight of on a 7300 series computer 3, 7
  positioning 7, 14, 21, 134
  safety instructions for 138
  supported by the computer 7, 14, 21
  turning on 28, 31
Monitors & Sound control panel 94, 97
mouse
  checking connections 94
  cleaning 143–144
  connecting 25–27
  illustrations 2, 12, 19
  learning to use 34–35
  locking/unlocking 145–146
  proper positioning of 134
  troubleshooting 94
mouse button 34–35
mouse cable 25, 26, 94
Mouse control panel 94
Mouse Keys feature 95
mouse tracking speed, performance and 94
moving
  a 7300 series computer 3
  the Guide window 37
musculoskeletal discomfort from computer use 131, 132, 135

N

"native" programs 80
navigation buttons
  Acrobat Reader 50
  Guide window 37
network administrator, obtaining access privileges for shared items 101, 103
Network extension 101
networks, troubleshooting 100–103
Next Page button, Acrobat Reader 50
nonvolatile video RAM. *See* NVRAM
normal installation of system software 115–118
NVRAM, resetting 65–66, 92, 102

O

office furniture, arranging to prevent discomfort 133–134
online help. *See* Acrobat Help; Balloon Help; Macintosh Guide
Open/Close button on CD-ROM player 47, 82–83
opening
  Acrobat Reader 47–48
  the CD-ROM tray 47, 82–83
  documents, troubleshooting 78–79, 85
operating system software. *See* system software

P

page number box, Acrobat Reader 51
Page Only button, Acrobat Reader 49
page size buttons, Acrobat Reader 51
parameter RAM. *See* PRAM
PC Exchange 79, 90
PCI expansion cards 45
performance of computer, troubleshooting 92–94
peripheral equipment, connecting 1, 11, 18
Photo CDs, troubleshooting 88
PlainTalk 74
plugging in the computer and monitor
  7300 series computers 4–10
  8600 series computers 13–17
  9600 series computers 20–24
pointer 34, 94, 95
Portable Document Format (PDF) files 39, 45
ports
  ADB
    on 7300 series computers 9–10
    on 8600 series computers 16–17
    on 9600 series computers 23–24
    connecting the mouse and keyboard to 25–27
  monitor
    on 7300 series computers 9
    on 8600 series computers 16
    on 9600 series computers 23–24
power button, troubleshooting 31, 59
power cords. *See* computer power cord; monitor power cord
Power key
  illustrations 28
  restarting the computer 59
  starting the computer 28
  turning off the computer 43
  waking the computer 31
Power Macintosh MP–compatible computer, troubleshooting 74
Power Macintosh User's Manual CD-ROM disc ix, x, 36, 45–48, 54
power-on light on the monitor 31
power supply 142
power switch on the monitor 28
PRAM, resetting 65–66, 92, 102

Can't Find It?
See also Macintosh Guide's onscreen index. Open the Guide (?) menu and choose Macintosh Guide (or Mac OS Guide); then click the Index button.

Preferences folder 65, 102
Previous Page button, Acrobat Reader 50
Previous System Folder 121, 122
Print command (Acrobat Reader File menu) 53
Print dialog box (Acrobat Reader) 53
printer drivers 99–100
printers, troubleshooting 66, 99–100
printing in Acrobat Reader 53
problems. *See* Apple-authorized dealers/service providers; customer support; error messages; troubleshooting
programs. *See* application programs
Put Away (File menu) 54, 81, 82, 91, 141

Q

question mark
  icon for system software problems 66, 113, 114
  icon for the Guide menu 33, 34
QuickTime 88
Quit (File menu) 81, 91

R

radio and television reception, interference with vi, 138
RAM. *See* memory
RAM disk 74, 93
Read Me documents 39
rebuilding the desktop 72, 126–127
reinstalling. *See* installing
removable storage devices, file sharing and 102
repairing a damaged disk 107–110
repetitive stress injuries (RSIs) 132
replacing the computer clock battery 97
restarting the computer 59, 71, 72, 83
Restart (Special menu) 59, 113

S

safety instructions
  cleaning equipment 140, 142–144
  general precautions 136–137
  grounding the computer 6, 13, 20, 137
  handling CD-ROM discs and floppy disks 84–85, 139–141
  handling the keyboard and monitor 138
  lifting a 7300 series computer 3
  liquid spills on equipment 136, 137, 138, 140, 141
  locking/unlocking the mouse 145–146
  servicing the power supply 142
  setting the voltage switch on a 7300 series computer 4, 6
  using the CD-ROM drive vii, 82, 140–141
saving
  changed information on a CD-ROM disc 85
  current set of system extensions 126–127
  documents, before restarting the computer 59
screen. *See also* monitors
  appears dark 64
  minimizing glare and reflections 134, 135
  positioning 7, 14, 21, 134
screen saver programs 64
scroll arrows 41
SCSI devices 66, 70, 107
security bar on 7300 series computers 2
service and support. *See* Apple-authorized dealers/service providers; customer support
Sets pop-up menu 126, 127

setting up
7300 series computers 1–10, 25–27
8600 series computers 11–17, 25–27
9600 series computers 18–24, 25–27
shared disks, troubleshooting 101, 103
shared folders, deleting files from 79
shared libraries 80
Sharing Setup control panel 101, 102, 103
Show All (Application menu) 80
Show Balloons (Guide menu) 38–39
shrinking the Guide window 37
Shut Down (Special menu) 43, 71, 83. *See also* turning off the computer
size box 41
sleep state 31, 64
Slow Keys feature 95
Small Computer System Interface. *See* SCSI devices
sound, problems recording from an audio CD 87
Special menu
Eject Disk 81, 82
Empty Trash 42, 79
Restart 59, 113
Shut Down 43, 71, 83
speed of computer, troubleshooting 92–94
starting up the computer
from the CD-ROM disc 68, 84, 112–113
for the first time 28–31
troubleshooting 31, 64–72, 92
startup disk, troubleshooting 67, 92, 107
Startup Disk control panel 92
status bar, Acrobat Reader 48, 49, 51
Sticky Keys feature 95
sunlight, computer exposure to 137
system extensions. *See also* Extensions Manager control panel
Apple CD-ROM 81, 84
AppleShare 101
checking for compatibility 69, 77, 92, 96, 105–106
Foreign File Access 84, 86
Network 101
reinstalling 117, 122
saving current set of 126–127
turning off/on 65–66, 96, 105–106, 126–127
viewing options 61
System Folder
avoiding more than one 61
creating a new one 118–122
files contained in 78
troubleshooting 69
System Folder Information (Apple System Profiler) 61
System Overview (Apple System Profiler) 60
system software
installing 114–125
optional 74
troubleshooting 66–68

T

TCP/IP control panel 100
Technical Information booklet, monitor support 7, 14, 21
television and radio reception, interference with vi, 138
temperature limits, for floppy disks 139
testing and repairing a hard disk 107–110
three-wire grounding plug 6, 13, 20, 137
Thumbnails and Page button, Acrobat Reader 49

Can't Find It?
See also Macintosh Guide's onscreen index. Open the Guide (?) menu and choose Macintosh Guide (or Mac OS Guide); then click the Index button.

title bar 41
toolbar, Acrobat Reader 48, 49–51
Topics button, Macintosh Guide 37
Trash
  deleting locked files in 79
  emptying 42
troubleshooting. *See also* diagnostic techniques; error messages
  Apple System Profiler and 60–61
  application program malfunctions 73–80
  audio CDs don't play correctly 87
  blinking icons in menu bar 98, 99
  blinking question mark 66, 113, 114
  "bomb" message on screen 59, 75–77, 88
  cable connections 31
  CD-ROM disc/drive problems 81–88
  clock keeps time inaccurately 97
  computer freezes 68–69, 71, 75, 88
  computer makes unusual sounds 64–66, 99
  computer won't restart 71
  control panel compatibility 77, 92, 96
  deleting files 79
  desktop looks different when you start up 71, 83
  displaying system information 60–61
  documents, working with 78–79
  empty flashing box appears at startup 72
  equipment connections 68–69
  file-sharing problems 79, 100–103
  floppy disk/drive problems 67, 89–91, 141
  font files, damaged 98
  hard disk problems 70, 92, 107–110
  icons appear different from usual 98
  icons do not appear at startup 72
  interference with radio and television reception, vi, 138
  ISO 9660– or High Sierra–format files 86
  keyboard problems 94–96
  Macintosh Guide and 60
  memory problems 73–77, 80, 88
  microphone malfunctions 97
  mouse problems 94
  network usage problems 100–103
  performance and speed decrease 92–94
  Photo CD problems 88
  pointer alternates between an arrow and wristwatch 72
  pointer doesn't move 94
  Power Macintosh MP–compatible computer 74
  PRAM and NVRAM problems 65–66
  printer problems 66, 99–100
  rebuilding the desktop 71
  restarting the computer 59, 71, 72
  right-angle bracket (>) on screen 97
  "sad Macintosh" icon 68
  screen is dark 64
  SCSI device connections 66
  shared disk problems 101, 103
  starting up the computer 31, 64–72, 92
  startup disk problems 67, 92, 107
  system extension compatibility 69, 77, 92, 96, 105–106
  system software problems 66–68, 118
  typing produces nothing on screen 95–96
  a window has disappeared 80
turning off
  AppleTalk 94, 99
  the computer
    to connect cables 31
    general instructions for 43
    to install equipment, expansion cards, or memory 45
    for troubleshooting purposes 70, 82, 83
  system extensions 65, 69, 77, 96, 105, 126–127

turning on
Acrobat Help 48, 52
AppleTalk 99, 100, 101, 103
the computer
for the first time 28–31
troubleshooting 31, 64–72, 92
system extensions 66, 106
tutorial. *See* Macintosh Tutorial
typing, nothing appears on screen, troubleshooting 95–96

U

underlined text in Acrobat Reader 50
unlocking floppy disks 77, 79, 89
unlocking/locking the mouse 145–146
unplugging the power cord 6, 14, 21, 136
updating the hard disk 116, 119, 124
upgrading system software 114
Users & Groups data file 102
User's Manual. *See Power Macintosh User's Manual* CD-ROM disc

V

ventilation around computer components 7, 14, 21, 137
ventilation openings on the computer and monitors 138
version number of application programs, viewing 76
Views control panel 94
virtual memory 74, 93
virus protection programs 76
voltages used in different countries 5
voltage switch on 7300 series computers 4, 6, 8
Volume Information (Apple System Profiler) 61

W, X, Y

waking the computer 31, 64
warranty on the computer 63
wetness or moisture, computer exposure to 136, 137, 141
windows
hiding and showing 80
working with 41
Windows/DOS documents or disks, working with 79, 90
Window-Splitter, Acrobat Reader 49
work space, arranging to prevent discomfort 133–134
World Wide Web, getting help from 38

Z

zoom box 41
zooming the Guide window 37
Zoom In/Out tools, Acrobat Reader 51

The Apple Publishing System

This Apple manual was written, edited, and produced on a desktop publishing system using Apple Macintosh computers and QuarkXPress. Technical illustrations were drawn in Adobe™ Illustrator; screen shots were created and modified with system software, ExposurePro, and Adobe Photoshop. Final pages were output using PostScript™ technology.

Text type is Times®, display type is Helvetica® Narrow, and cover type is Apple Garamond, Apple's corporate font. Ornaments are custom symbols designed for Apple Computer. Some elements, such as computer voice, are set in Apple Courier, a fixed-width font.

PostScript, the LaserWriter page-description language, was developed by Adobe Systems Incorporated.